

# DISTRIBUTION AGE

AUGUST, 1948

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# Is Your Product Priced to Sell?

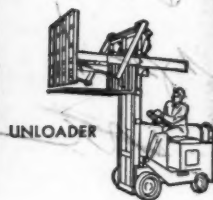
## Slash Production Costs With TOWMOTOR

# MH\*

Cut 20% to 30% from present production costs with Towmotor Mass Handling. Rushing raw materials to production lines—speeding finished products to shipping—stacking full loads into overhead storage space—Towmotor is the busiest piece of equipment you'll ever own! Gasoline-powered Towmotor Fork Lift Trucks lift, transport and stack full loads any time, anywhere—operate at maximum capacity 24 hours a day, every day. Towmotor handling keeps pace with production. Take a tip from the men who make handling pay a profit: More professional handlers use Towmotor than any other fork lift truck.

\* M H is MASS HANDLING—the systematic movement of the most units, in the shortest time, at the lowest cost.

Double and triple savings with standard Towmotor Accessories. However, if a standard Towmotor unit does not solve your handling problem, Towmotor engineers welcome the opportunity to design special equipment to meet your specific needs. Details are available without obligation.



### SEND FOR FREE BOOK!

Towmotor Materials Handling Analysis Guide shows you how to recognize, analyze and solve your handling problems. Send for a free copy.

### TOWMOTOR CORPORATION

DIVISION #9

1226 E. 152nd St., Cleveland 10, Ohio

Representatives in all Principal Cities in U. S. and Canada



# TOWMOTOR

THE ONE-MAN-GANG

## FORK LIFT TRUCKS and TRACTORS

RECEIVING • PROCESSING • STORAGE • DISTRIBUTION



# BAKER TRUCKS help SHERWIN-WILLIAMS

save \$288,000.00 per year



*Tiering cartons on pallets three high with Baker Fork Truck to conserve storage space.*



*Tiering on racks allows access to underneath pallet load with Baker Fork Truck.*



*Baker Fork Truck tiers drums on pallets three high.*



*Horizontal storage on racks allows removal of single drums without disturbing drums above.*

● The profitable application of Material Handling Engineering is convincingly demonstrated by Sherwin-Williams in their recently constructed Chicago warehouse. Designed by Albert Kahn for the most modern methods and equipment, it has effected savings amounting to \$288,000.00 per year, which represents more than 30% of the investment required.

BAKER Trucks play an important role in reducing man hours for handling by 42.5% while increasing tonnage by 86%. Other equipment includes pallets, special racks, trailers and drag-chain conveyors.



*Stock is taken from conveyors and placed on pallet-bearing trailers for hauling to storage.*



*Baker Tractor hauls multi-trailer train of loaded pallets from conveyor to storage area.*



*Baker Fork Truck removes pallet loads from trailers and tiers them three high.*



*Box car or truck loading is speeded by handling pallet loads with fork truck.*

## Flow

### CONTEST WINNER

The detailed account of this material handling operation won second prize in the 1947 Flow Cost Analysis Contest for Charles H. Day, Assistant to General Manager, Chicago Operations, Sherwin-Williams Company. It appeared in the May and June 1948 issues of Flow magazine.

*If you have a material handling problem, your nearest Baker representative, who is a qualified Material Handling Engineer, will gladly show you how you can make similar savings.*

BAKER INDUSTRIAL TRUCK DIVISION of The Baker-Raulang Company • 2176 WEST 25th STREET • CLEVELAND, OHIO  
In Canada—Railway and Power Engineering Corporation, Ltd.

# Baker INDUSTRIAL TRUCKS

# I found out the hard way...

## *It's better to own a Mack!*



# Mack

**trucks for every purpose**

Mack Trucks, Inc., Empire State Building, New York 1, New York. Factories at Allentown, Pa.; Plainfield, N. J.; New Brunswick, N. J.; Long Island City, N. Y. Factory branches and dealers in all principal cities for service and parts. In Canada: Mack Trucks of Canada, Ltd.

● "Are you kidding," I used to say to this Mack salesman. "I should pay more for a truck when I can get another kind cheaper? So what if it's not as good. I run the wheels off it — then I buy a new one. That way I'm ahead of the game and I always got a new truck, see."

I was a guy who knew all the angles — Yeah!

Now look at me — right behind the eight ball. Here's how I got there. The other night I load out with a rush shipment for one of my best customers. Ninety miles outside the big town that heap of mine gives a last gasp and dies on me. What the repair bill is doing to me is bad enough. What my customer is doing to me shouldn't happen to a dog.

But that's not the worst of it. My brother-in-law, Willie, he buys nothing but Macks, and he won't let me forget it for a minute. You should have heard him last night.

"Just like I always say," he crows. "There's one born every minute. You pay your money and you take your choice. Now those Macks of mine . . ."

Personally, I always thought somebody dropped Willie on his head when he was a baby. But here lately, I'm beginning to think it didn't do him any harm.

*No doubt about it! Willie's the boy with the right idea. To a smart truck operator it isn't a question of whether he can afford a Mack — it's a question of whether he can afford not to own one.*

*Next time you buy a truck, remember this: A Mack is the best buy in the end, because it's a better truck to start with.*

Modern highway transportation—of vast importance in our economy—is made possible by the coordination of other basic phases of distribution: materials handling, packing and packaging, warehousing, marketing, finance, insurance, and service and maintenance. The net result of this coordination has been to reduce overall distribution costs, expand markets and foster production. Highway transportation, through bringing together the far-flung corners of the nation, has led to a higher standard of living for all people. Photograph by Ewing Galloway.

# DISTRIBUTION AGE

The Magazine That Integrates All Phases Of Distribution

100 E. 42nd St., New York 17

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Publisher

**D. J. WITHERSPOON**  
Editor

**GEORGE POST**  
Assistant Manager

• • •

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(Incorporated)



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**August, 1948**

## Special Features

Strangled Transportation .....	Harvey C. Fruehauf	19
Unit Load Motor Shipments .....	Randall R. Howard	20
Reasonable Freight Rates .....	G. Lloyd Wilson	22
Multiwall Paper Bags .....	Fred Hoster	24
Packaging's Gray Market .....	Charles L. Saperstein	26
Progressive Ports—Charleston .....		28
Water Transportation Standards .....	Benjamin Melnitsky	30
Integrate Handling .....	Matthew W. Potts	35
New Trucking Services .....	Henry G. Elwell	36
Ratios, Rates and Reason .....	Frank E. Asher	38
National Transportation Policy .....	John H. Frederick	42
Freight Rates and Pallets .....	Edwin Chester Hastings	44
Current Job of Market Research .....	Walter E. Eliason	48
Air cargo and the Feeders .....	Michael E. Cole	50
600 out of 12,000 .....	Arnold Kruckman	52
Mechanized Handling in Pallet Production .....		54
Handling Equipment Producers Meet .....		58
Distribution is Our Business .....	L. H. Wohlwend	66

## Departments

Editor's Page .....	D. J. Witherspoon	15
Letters to the Editor .....		16
Coming Events .....		79
Books and Catalogs .....		79
Getting Down to Cases .....	Leo T. Parker	80
People in Distribution .....		81
Distribution Briefs .....		82
Public Warehouse Section .....		83
Index to General Advertisers .....		114

**STATEMENT OF POLICY** . . . Our policy is based on the promise that distribution embraces all activities incident to the movement of goods in commerce. If distribution is to be made more efficient and economical, we believe business management must consider more than sales, because more than sales are involved. Marketing, while vital, is one phase only of distribution; seven other practical activities not only are necessary but condition marketing costs. Most commodities require handling, packing, transportation, warehousing, financing, insurance, and service and maintenance of one kind or another before, during or after marketing. We regard all of those activities as essential parts of distribution. Hence, the policy of DISTRIBUTION AGE is to give its readers sound ideas and factual information on methods and practices that will help them to improve and simplify their operations and to standardize and reduce their costs in all phases of distribution.

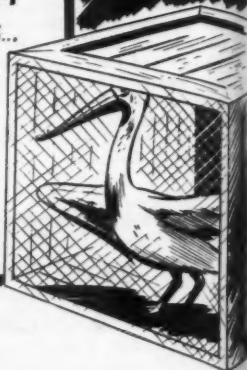


## ALONG THE WAY...OF TWA



### COBRAS FLY TO CATALINA

VENOMOUS COBRAS...STORKS...PELICANS...FOXES...RATS...MONKEYS...ALL MADE UP AN AMAZING 23-CASE SHIPMENT VIA **TWA** FROM BOMBAY TO CATALINA. FLYING ZOO BECAME PART OF EXHIBITION IN CALIFORNIA ISLAND RESORT. BIRDS AND BEASTS ARE FREQUENT GUESTS ON **TWA** INTERNATIONAL ALL-CARGO FLIGHTS.



### PILFERAGE RISK REDUCED

BECAUSE **TWA** AIR CARGO TRAVELS FAST AND IS PROTECTED EN ROUTE, SHIPMENTS ARE NOT EXPOSED TO RISK OF THEFT. SAVES INSURANCE.



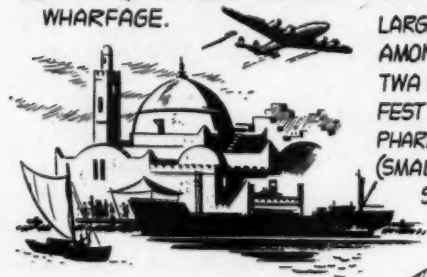
### SAVE TIME TODAY, SHIP **TWA**.....



WE'LL ARRANGE PICK-UP AND DELIVERY OF SHIPMENTS... COMPLETE ROUTING SCHEDULES TO ANY POINT IN THE WORLD.

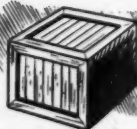
### **TWA TO THE RESCUE**

SHIPS LAID UP WITH DAMAGED RUDDERS IN FOREIGN PORTS SOLVE DILEMMA BY SENDING ENTIRE RUDDER TO U.S.A. FOR REPAIRS. QUICK RETURN SAVES WHARFAGE.



### TINY SHIPMENT OR TONS

LARGE OR SMALL **TWA** TAKES 'EM ALL. AMONG ITEMS ON RECENT N.Y.-PARIS **TWA** INTERNATIONAL ALL-CARGO MANIFEST WAS A 2-GRAM (CONCENTRATED PHARMACEUTICAL) SHIPMENT. ANOTHER (SMALL CRATED AIR PLANE) TOUCHED SCALES AT 4000 POUNDS!



### ON THE RECORD

IN FIRST YEAR OF OPERATION **TWA** INTERNATIONAL AIR CARGO FLEW OVER 4,365,000 SCHEDULED TON MILES. MORE THAN 100 BIG 4-ENGINE ALL-CARGO FLIGHTS WERE MADE ON **TWA** DIRECT SKY ROUTES TO MAJOR MARKETS IN 11 COUNTRIES.



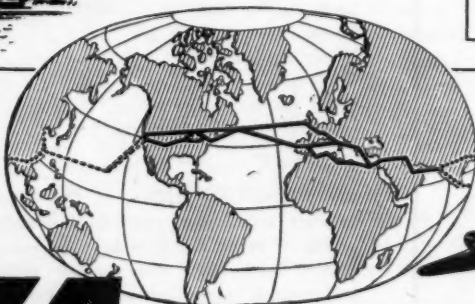
### RATES SURPRISINGLY LOW

Check up on **TWA** Air Cargo rates. They're lowest in **TWA** history. Call **TWA** (Trans World Airline... see phone book) or any international freight forwarder if shipment is for overseas.

# TWA

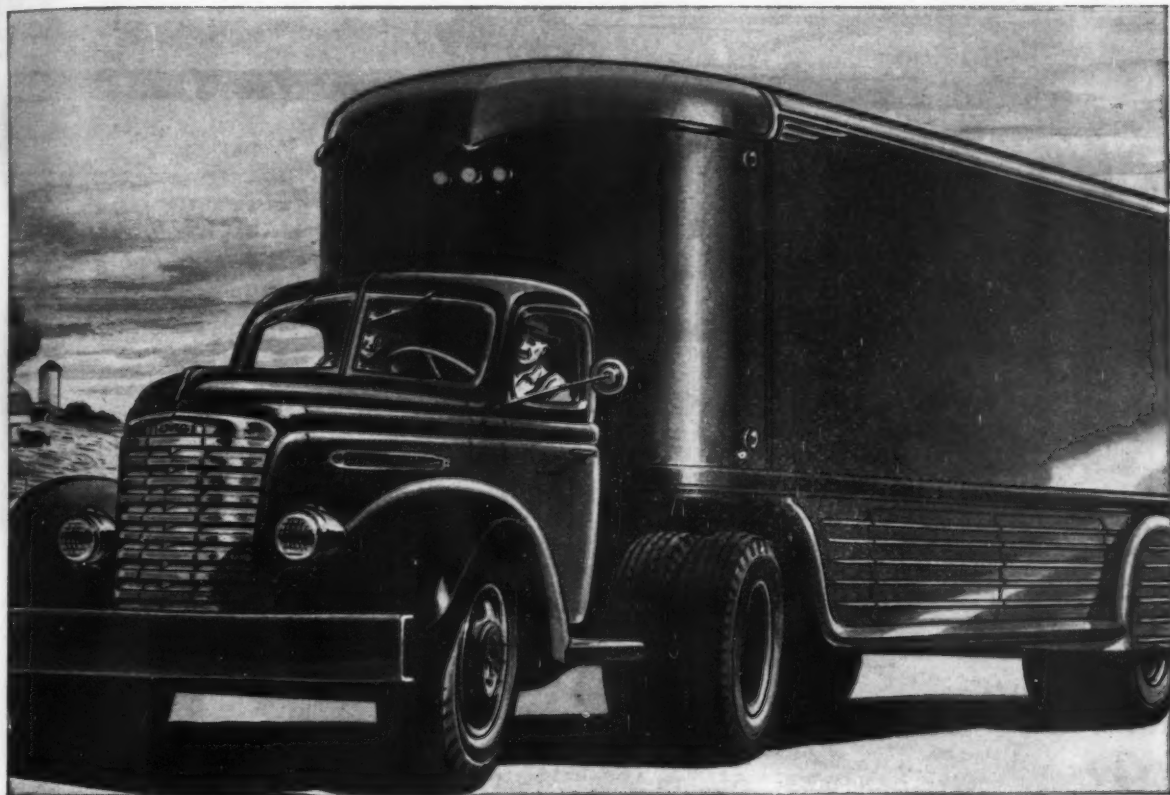
TRANS WORLD AIRLINE

U.S.A. • EUROPE • AFRICA • ASIA



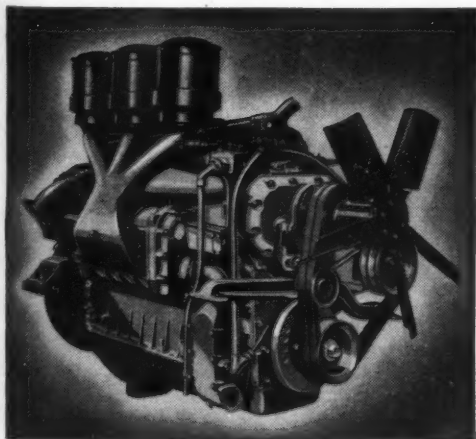
### WORLD MARKETS MOVE CLOSER

**TWA** Air Cargo flies up to four-mile-a-minute speed direct to principal cities in Europe, Africa, Asia. No off-loading. Frequent flights. **TWA** connections link every part of the world. There's no delay...via **TWA**.



# BUILT TO "TAKE IT"

## ... GASOLINE OR DIESEL



GMC heavy duty engines are available in six sizes ... 308, 361, 426 and 477 cubic inch gasoline engines of famous GMC "Army Workhorse" design ... four- and six-cylinder GM 2-cycle Diesels of 133 and 200 horsepower respectively. Illustrated is the "6-71" Diesel.

GMC heavy duty trucks are built in weight ratings that go up as high as 90,000 pounds for truck, trailer and load. That's a lot of weight, and it calls for big powerful engines ... heavy, husky axles ... and deep, thick frames, plus rugged strength and sturdiness in every other structural part.

GMCs are designed and engineered by men who are expertly versed in heavy hauling applications, gasoline and Diesel. They are produced in factories devoted exclusively to the production of commercial vehicles.

That's why GMC heavy duty trucks are the choice of so many of the nation's most experienced and successful heavy haulers. Make them first choice for your job, too ... from the many gasoline and Diesel models now available for quick delivery.

GMC TRUCK & COACH DIVISION • GENERAL MOTORS CORPORATION



*Time Is Henry J. Taylor, "Your Land and Mine," Mutual Network, Monday and Friday.*

THE TRUCK OF VALUE

GASOLINE • DIESEL



# The Governor of Kansas *invites You*



STATE OF KANSAS  
OFFICE OF THE GOVERNOR  
TOPEKA

FRANK CARLSON  
GOVERNOR

## To American Industry:

Kansas has matchless and abundant resources which await only the magic touch of industry to spread their benefits to the world. Its rich soil produces the essential foodstuffs of life. Beneath the surface is stored in abundance cheap energy to turn the wheels of industry. The possibilities of rich reward are limitless.

The facilities of the State, including the active and aggressive Industrial Development Commission, are pledged to offer every encouragement and assistance in working out the problems of new industries seeking to process and distribute the great natural resources of Kansas, which furnish fertile and almost virgin soil for aggressive modern development. A thorough investigation is always welcomed. Modern transportation permits products of Kansas industry to radiate cheaply to all parts of the country.

Sincerely,

*Frank Carlson*  
Governor



Frank Carlson

\* One of a series of advertisements based on industrial opportunities in the states served by Union Pacific Railroad.

Unite with Union Pacific in selecting sites and seeking new markets in California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, Oregon, Utah, Washington, Wyoming.

\*Address Industrial Department, Union Pacific Railroad  
Omaha 2, Nebraska

## UNION PACIFIC RAILROAD

*Road of the Daily Streamliners*



# Here's why...

## ... America's Top Industries specify **ELECTRIC** Industrial Trucks

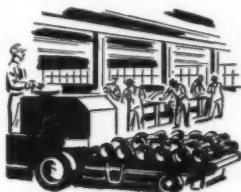


Across the country, America's top industries are specifying electric industrial trucks—because they know from *experience* that battery power means *lowest-cost-per-ton-handled*. The dependability, rugged construction, low maintenance

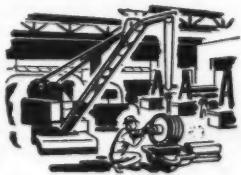
cost and other inherent advantages of electric trucks add up, in every case, to *higher profits*.

Here are only a few examples (the names of these users, and many more, are available on request):

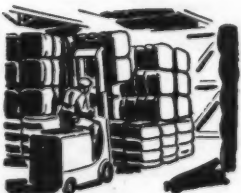
**ONE OF THE LARGEST AUTOMOBILE PLANTS** reports: "increased tonnage handled per man-work-hour ... have used battery-powered trucks for 19 years ... maintenance is quite low!"



**A LEADING PRODUCER OF TURBINES, CONDENSERS AND BLOWERS**, whose electric truck fleet is in use 12 hours a day, points out "no unscheduled loss of service" and "availability ... all that could be desired."



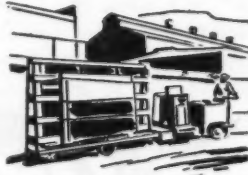
**A LARGE MANUFACTURER OF SURGICAL BANDAGES AND TAPES**, handling thousands of pounds of highly inflammable raw cotton and chemicals daily, praises battery power's freedom from fire hazard, calls electric trucks "ideal in all areas."



**A BIG-NAME STEEL COMPANY** says: "... at one time other types of equipment were used in our ... Department, but we swung over to battery-powered trucks for reliable, low-cost operation."



**ONE OF THE LARGEST PLATE GLASS MAKERS** depends on the smooth starting, acceleration and stopping of battery-powered trucks to keep product damage at a minimum and assure maximum safety for employees.



**ONE OF THE FOREMOST NATIONAL BAKERS**, whose foodstuffs are likely to absorb contaminating odors, calls the cleanliness of battery-powered trucks entirely satisfactory.

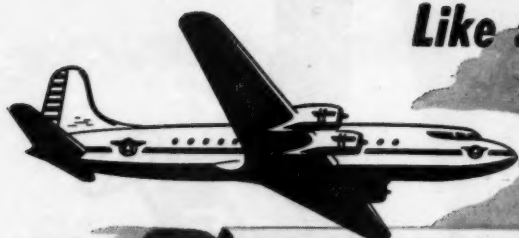


## THE ELECTRIC INDUSTRIAL TRUCK ASSOCIATION

29-28 D FORTY-FIRST AVE., LONG ISLAND CITY 1, N. Y.

The **MATERIAL-HANDLING HANDBOOK** contains many ideas for lowest cost material handling, taken from the experience of users such as those listed above. Write for your free copy.





**Like a 4-Mile-A-Minute  
Pneumatic Tube**

**with a 7000 lb. Capacity**

# Delta Air Freight

**TO and THRU the SOUTH**

You pop a container into the tube, there's a swoosh of air and it's there. Delta Air Freight is just like that—like a pneumatic tube system from your shipping dock to cities of the South. Except that 7,000 pounds rides in the cargo bins of Delta DC-4's, traveling straight as a wire strung taut and saving time at 240 miles per hour.

These big DC-4's fly south on fast schedules from Chicago, Cincinnati and Detroit\*, and across the South from Dallas-Fort Worth and western connections. Special all-cargo planes shuttle between Chicago and Dallas, serv-

ing Cincinnati, Atlanta, Birmingham and New Orleans en route. With the "Flying Freighters" and high frequency of passenger flights carrying cargo, you get fast dispatch.

As for economy, all you have to do is compare the rates. Delta rates have come down and down, while surface rates were going up. Now you can save days and dollars both, via Delta. Here are typical rates; compare them and travel times with any other means and you will see the savings.

General Offices: Atlanta, Ga.



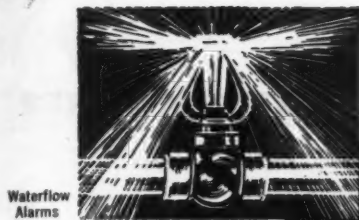
Delta Air Freight Rates  
per 100 pounds between:

Chicago-Cincinnati . . . . .	\$3.07
Cincinnati-Atlanta . . . . .	\$4.55
Atlanta-Chicago . . . . .	\$6.55
Dallas-New Orleans . . . . .	\$5.05
Cincinnati-New Orleans . . . . .	\$8.00
Chicago-New Orleans . . . . .	\$8.95
Fort Worth-Atlanta . . . . .	\$8.00
New Orleans-Atlanta . . . . .	\$5.05

Delta Air Freight Takes  
A Load Off Your Mind



Write or phone any Delta office for complete rates and surface cost comparisons, plus a new folder describing Air Freight details and uses.



Waterflow  
Alarms



Watchman  
Supervision

# ADT

Central Station-Supervised

## ELECTRIC PROTECTION SERVICES

safeguard against

### FIRE · BURGLARY · HOLDUP

and other hazardous conditions

A NATION-WIDE  
ORGANIZATION



Manual  
Fire Alarms



Automatic Sprinkler  
Supervision



Automatic  
Fire Alarms

Immediate action when danger threatens is the primary function of ADT Central Station Protection Services.

Protective installations in thousands of commercial, industrial and other properties throughout the United States are connected to ADT Central Stations for immediate detection of fire, burglary and other hazards, and for prompt notification of fire and police departments or other emergency forces.

Whatever the type of protective signaling system, ADT installs the equipment and provides continuous supervision, periodic tests and inspections and complete maintenance by an organization of trained and experienced personnel. This continuous specialized attention by the ADT organization assures constantly dependable operation.

Write us concerning your protection problems.



Vault  
Burglar Alarms



Mercantile  
Burglar Alarms

**AMERICAN DISTRICT TELEGRAPH CO.**  
155 SIXTH AVENUE NEW YORK 13, N. Y.  
Central Stations in All Principal Cities



# WAREHOUSING

## IN THE GRAND MANNER

"BAYWAY" is big enough to serve you, no matter how exacting and extensive your needs may be.

Yet "BAYWAY" is small enough to know you ... to give your storage and shipping problems highly individual and personal attention.

### "BAYWAY" offers:

- More than 1,000,000 square feet of open and closed storage space.
- Dry storage—heated or unheated; bonded or free.
- Completely sprinklered buildings—low insurance rates.
- Convenient location in the New York Port area.
- Storage-in-transit arrangements on the Jersey Central Railroad.
- Modern fumigation plant under U.S. Government supervision.
- Lighter, rail, and truck service.
- Manufacturing space.

Write today for full information on the comprehensive services and modern facilities available to you at "BAYWAY."

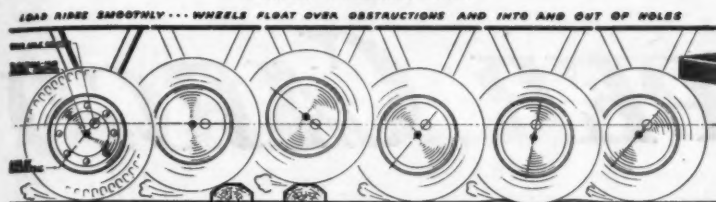
## BAYWAY

*Terminal Corporation*

ELIZABETH 2, NEW JERSEY  
ELIZABETH 2, NEW JERSEY

New York Traffic Office: 60 Beaver St., New York 4, N. Y.

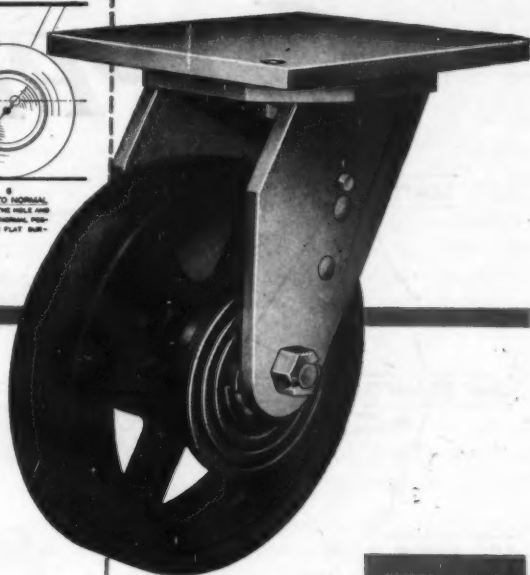
DIAGRAMMATIC DRAWING OF "FLOATING-HUB" ACTION  
SHOCK ABSORPTION



1. NORMAL LOAD POSITION
2. SENSING OBSTRUCTION OR OBSTACLE  
LOAD MOVEMENT CARRIES FORWARD - WHEEL, ROLLERS AWAY AND STARTS TO CLIMB
3. OVER OBSTRUCTION  
WHEEL MOVES UP AND OVER OBSTACLE WITHOUT LIFTING THE LOAD
4. BACK TO NORMAL  
OVER THE OBSTRUCTION - WHEEL RETURNS TO NORMAL POSITION
5. INTO HOLE OR DEPRESSION  
WHEEL, MOVING INTO A HOLE OR LOW SPOT, CARRIES LOAD IN LEVEL POSITION
6. BACK TO NORMAL  
OUT OF THE HOLE AND BACK IN NORMAL POSITION ON FLAT SURFACE

A VERY VITAL AND IMPORTANT ELEMENT OF THE "FLOATING-HUB" ACTION IS THE REDUCTION OF IMPACT FORCE - BECAUSE OF THE ABILITY OF THE WHEEL TO "RIDE WITH THE PUNCH" - BACKING AWAY WITH THE BLOW -

Swivel type  
industrial trailer caster



*For Smooth Industrial Mobility*

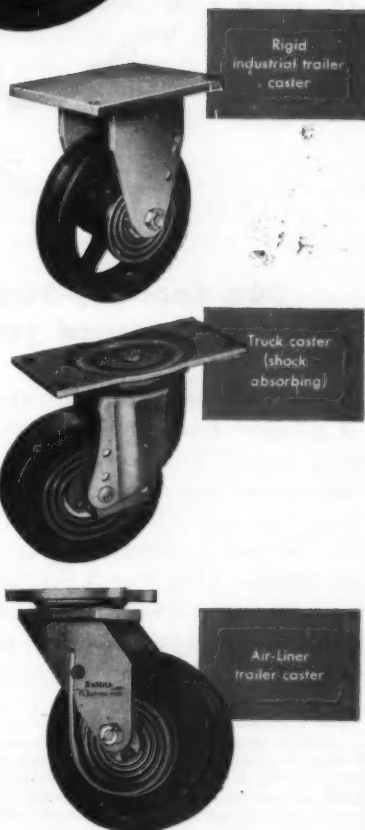
# IT'S BASSICK'S "FLOATING-HUB"

*This exclusive Bassick caster development brings new efficiency to materials handling*

Bassick's amazing caster development, "Floating-Hub", product of modern engineering and research, speeds up materials handling . . . absorbs shocks . . . dampens vibration . . . gives better protection to the load . . . longer life to casters, equipment and floors.

"Floating-Hub" casters are widely used throughout industry on powered trailer trucks . . . delicate mobile equipment . . . platform trucks . . . liquid carriers . . . mobile racks and fixtures and scores of special applications.

Sold by leading industrial distributors. For more information write THE BASSICK COMPANY, Bridgeport 2, Connecticut. Division of Stewart-Warner Corporation. *Canadian Division:* Stewart-Warner-Alemite Corporation, Ltd., Belleville, Ontario.

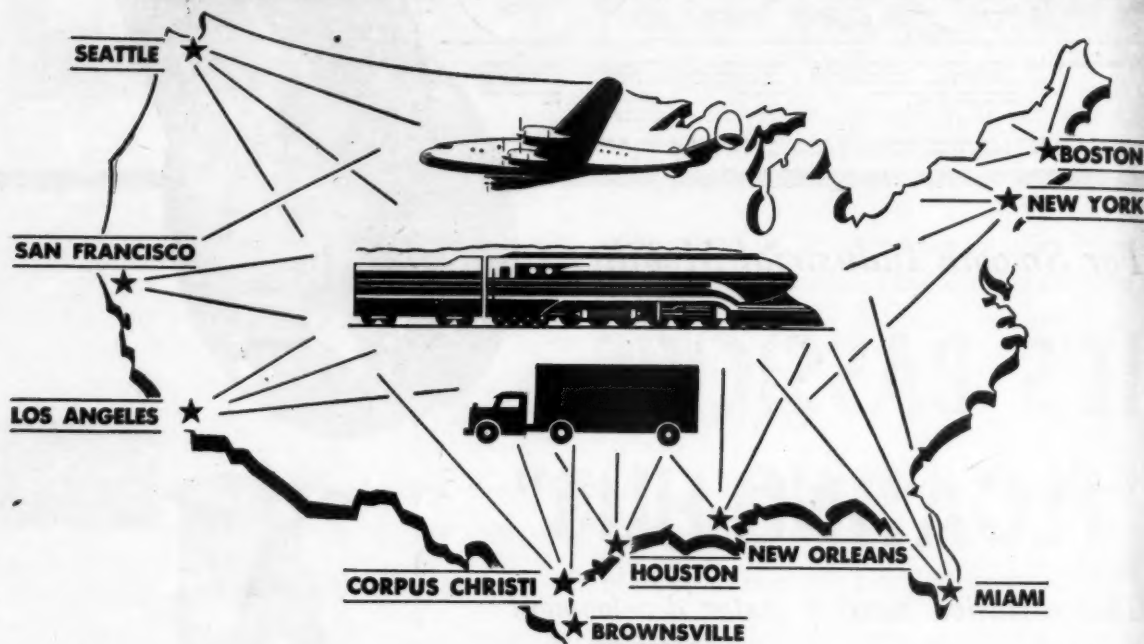


Making more kinds  
of Casters...  
Making Casters  
do more

# Bassick

You get personalized service on

# CLIPPER CARGO



**306 Specially-Staffed Shipping Agents and 12 Domestic Airlines speed your goods to Pan American Gateways**

**T**ODAY, wherever international trade flows, Clipper Cargo flies. From the 10 conveniently located gateways shown above, Pan American speeds your shipments to Europe, Africa, the Near East and India; to Central and South America; to New Zealand and Australia; and to Asia and Alaska. Only Pan American flies between all 6 continents and *no airline in the world flies to so many principal cities throughout the world.*

You'll find Clipper Cargo saves you money on

bulk shipments (25% less for over 100 pounds). You save, too, with low-cost insurance, lower inventories and warehouse costs, C.O.D. and collect services, faster turnover of your money, and lower packing costs.

306 local shipping agents and 12 domestic airlines are ready to speed your goods to Pan American gateways. For full information, call your Shipping Agent or any of our offices listed below.

Baltimore: Lexington 5343  
Boston: Liberty 2-3720  
Chicago: Dearborn 4900  
Cleveland: Superior 1848  
Detroit: Randolph 9435  
Houston: Beacon 3-9331  
Los Angeles: Michigan 2121  
Miami: Miami 3-7383  
Minneapolis: Lincoln 0617  
New Orleans: Canal 6391

New York: Stillwell 6-0600  
Philadelphia: Kingsley 5-5100  
Portland, Ore.: Broadway 6677  
San Francisco: Garfield 1-3075  
Seattle: Seneca 2121  
St. Louis: Main 1620  
Washington, D. C.: Republic 5700

**PAN AMERICAN**  
**WORLD AIRWAYS**





# ➡ **Only Skylift** **ELECTRIC TRUCKS** **GIVE YOU High Pressure Hydraulic Lift**



Skylift takes load through low doorways, then tiers the product inside, with low ceilings no handicap. BELOW, you see the same Skylift tiering 130 inches high in high-ceiling warehouses . . . a dual operation made possible by high pressure hydraulic lift.



## **Automatic is First With Most Great Features**

**1** **Caster type steering axle,** center pivoted and shock-proof. Compensates for uneven floor conditions. Provides easier steering, prevents transmission of road shock to steering wheel.

**2** **Air-cooled disk brake.** Mounted on end of motor where brake torque is least. This greatly prolongs life, gives greater braking surface, insures positive and smooth stopping.

**3** **Full automotive type controls.** Brake pedal and foot accelerator same as a car. One lever controls lift and tilt, the other forward and reverse. NEW-matic controller gives smooth, timed automatic acceleration through all speeds.

**4** **Lift, tilt and drive simultaneously or independently** with easy fingertip and foot control regardless of load conditions. The only hydraulic industrial truck that does not sacrifice lift or tilt performance to accomplish this feature, because only Skylift has High Pressure Hydraulic Lift and Tilt.



● Before you buy any industrial truck ask: "Has it *high pressure* or *low pressure* hydraulic lift?" You see, here is why it's so important to you.

*Low pressure* systems are fast becoming antiquated. *High pressure* hydraulic lift is a *modern, up-to-date system*—it is compact and efficient—and therefore, trucks so equipped can be much smaller in design to obtain better results.

There are other advantages, too. With Automatic's exclusive patented design, using *high pressure* hydraulics, you can *raise forks to maximum height of single lift*, before *increasing overall height of uprights*. Forks raise 67 inches before uprights begin to extend!

As you see by the pictures at the left, you get easy entry into box cars and other low clearance portals. You tier to maximum height without uprights jabbing into ceilings. The same Skylift also tiers up to 130 inches high, giving you a complete handling system for both **LOW** and **HIGH CLEARANCE** moving and tiering.

Only Automatic Skylifts offer you this double-duty money-saving feature, because **ONLY** Skylift Electric Trucks are equipped with **HIGH PRESSURE Hydraulic Lift**. No other industrial trucks have it, no others can offer it, because it is a **PATENTED** Automatic feature. Mail coupon.

## ➡ **Only Automatic GIVES YOU**

### **"BURN-OUT PROOF" Silicone Insulated Motors**

● Constant starting, stopping, reversing and overloading gives a motor an awful beating—often causes overheating, which means motor failure, trucks out of service.

Automatic foresaw the demands which would be put on Skylift Electric Trucks, so gave you the protection of **SILICONE MOTOR INSULATION**. This is an exclusive silicone varnish and silicone lubricant that protects Skylift motors, even if overloaded, and even after exposure to temperatures of 300 to 400 degrees Fahrenheit.

This means no armature or field coil failure, no trucks laid up for motor repair, no interruption of Skylift's smooth, efficient money-saving material handling operation. **NO OTHER** industrial trucks offer this **EXCLUSIVE** feature! Mail coupon.

#### **AUTOMATIC TRANSPORTATION COMPANY**

DIV. OF THE YALE AND TOWNE MFG. CO.

115 W. 87th St. Dept. M-8, Chicago 20, Ill.

( ) Send details on Automatic's Skylift Electric Trucks and exclusive **HIGH PRESSURE HYDRAULIC LIFT**.

( ) Have an ATCO Specialist make a free survey of our material handling costs.

Company Name .....

By .....

Street Address .....

City ..... Zone ..... State .....

# THIS SUPER WAREHOUSE HAS 2 SIDES ...

INSide AND OUTside

While some Trailers are being loaded or unloaded, the truck-tractors and drivers are out with others, picking up standard merchandise from local warehouses. Big Bear officials say the Trailers pay for themselves with savings in pick-up costs alone.

Two to three deliveries of staple goods go from the warehouse to big-city markets each week. Half of the Trailers make daily deliveries of fruits and vegetables directly from terminal. Thus, produce arrives faster, fresher and without double handling.



24-ft. Fruehauf pulled by Dodge tractor.



goods both in and out of the warehouse.

**Big Bear Markets, Detroit,** solve today's problem and plan for tomorrow's expansion with modernized warehouse facilities which take full advantage of Truck-Trailer flexibility and economy.

**Protected shipping and receiving docks,** at Trailer-bed level, are separately located to avoid traffic congestion.

Orders from retail markets are received on strict schedules. An order placed in the morn-

**AGGRESSIVE** merchandising, on the supermarket scale, demands a smooth, uninterrupted flow of

ing is pulled the same day, loaded in a Fruehauf (1500 cases to the load) and is delivered at 7:30 the following morning.

With lift-truck handling . . . pallet loading . . . and "shuttle" operation of the Trailers, there's no lost motion — no double handling. Tight scheduling enables Big Bear to operate the warehouse on a 5-day-a-week basis.

**Here's evidence** that it pays to *design* motor transport into your building right from the start. You'll find the experience of your traffic manager, your architect and a representative of your highway haulers invaluable in planning your new plant or warehouse. Be sure they all have a place on your planning committee.

World's Largest Builders of Truck-Trailers

**FRUEHAUF TRAILER COMPANY**

DETROIT 32 • LOS ANGELES 11

In Canada: Weston, Ontario

79 Factory Service Branches



"ENGINEERED  
TRANSPORTATION"

*Fruehauf Trailers*

Hear, Harrison Wood, Interpreter of World Events, Every Sunday, 3:00 P.M., E.D.T. over ABC. Consult Your Local Paper!

DISTRIBUTION AGE



## Highway Transportation

THE GROSS earnings of the for-hire motor carriers in 1947 amounted to 2.5 billion dollars, or approximately one-third of the freight revenue of the railroads. Yet despite its vast importance in our national economy, the motor carrier industry, when considered from the standpoint of the individual operator, is essentially small business. Striking evidence in support of this assertion is contained in the recent statement of Edward M. Welliver, of the American Trucking Associations, before a House subcommittee on small business, during his advocacy of legislation to ameliorate in some degree the financial burdens of the carriers. Of all the motor carriers subject to the Interstate Commerce Commission's jurisdiction, Mr. Welliver stated, 26 percent operate but one truck; 44 percent operate only one or two trucks; 56 percent operate only one to three trucks, and 92 percent operate fewer than ten trucks. Even the Class 1 motor carriers, the so-called "big operators," operate an average of only 29 vehicles.

In appraising the size of these Class 1 "big operators," it should be kept in mind that the ICC does not consider a railroad to be a Class 1 carrier unless its annual revenue exceeds a million dollars, whereas a motor carrier becomes Class 1 when its gross annual revenue exceeds \$100,000.

Because it is small business, the motor carrier industry finds itself in an intolerable financial position. Much of its credit is vendor, rather than established banking credit. In many cases, adequate reserves for the replacement of worn out equipment and facilities do not exist. An improved credit position, cash reserves and better financial support by bank funds and private capital are essential to the health of the industry.

The financial position of the motor carrier industry is rendered doubly difficult by its public utility status. This status, once sought by a young industry for the protection it afforded against competition within and without, is now proving cumbersome and unwieldy. For one thing, it is subjecting the industry to demands that it demonstrate the reasonableness of proposed changes in its present inadequate rate structure on the basis of "net rate of return." The use of this yardstick, as Dr. Frank Asher points out elsewhere in this issue, is not warranted in the case of the motor carrier industry,

however justifiable its use may be in the case of the railroads and other public utility industries.

The "net rate of return," Dr. Asher tells us, is commonly accepted as expressing the relation between net income (after depreciation, interest, taxes and other charges and reserves, but before dividends) to "net worth" (including the book value of outstanding stocks and non-corporative capital, plus accumulated surplus). The typical public utility industry, we are told, requires a heavy investment. "It demands and obtains tremendous amounts in borrowed funds in order to provide a relatively modest operating income. The turnover of its investment is slow, and measured by its huge investment, every fraction of a percent in net income is equivalent to very substantial earnings." The relation between operating revenue, on the one hand, and total assets, on the other, is immensely different for the motor carriers than for other public utility industries. Here Dr. Asher finds a tremendous and almost "awe-inspiring" disproportion between capital funds and gross revenue, between total assets and operating income, and between long term investments and annual turnover.

Motor carrier rates, Dr. Asher believes, should be measured on the basis of operating ratio. The "rate of return" is regarded as no proper yardstick in rate determination, particularly when the motor carrier's rate of return is contrasted, to his disadvantage, with corresponding figures of railroads and other public utilities rather than with the figures of other "small business" industries or trades.

Obviously, there should be a reappraisal of fundamental factors involved in the present rate structure of the motor carriers. This reappraisal should take into consideration the interests of both shippers and carriers. Recognition should be given to the need of the carriers for revenue sufficient to enable them to provide economical and efficient service now and in the future. Rates should be determined by the inherent requirements of the situation rather than by inapplicable standards.

*D.J. Witherspoon*  
Editor.



# NEXT MONTH

# LETTERS to the Editor

Topics to be discussed in **DISTRIBUTION AGE** for September include:

## SYSTEMS AND EQUIPMENT . . .

Staff experts and spokesmen for industry discuss the systems and equipment currently used or proposed for more effective and coordinated operations in relation to various distributive activities.

## INVENTORY CONTROL . . .

Inventory handling costs are too high. These costs can be kept down through the coordination of three subdivisions of management: materials handling, office procedure and storage . . . Fred Merish, special correspondent, outlines the part each should play in the overall picture and emphasizes the importance of effective systematization and coordination.

## GOOD DESIGN PAYS OFF . . .

Henry Dreyfuss, leading industrial designer, discusses basic rules in product design and demonstrates how industrial design, through commission or omission, can make or break a product at the point of sale.

## DISTRIBUTION STANDARDS AND SPECIFICATIONS . . .

Industry, beset with the rising cost of doing business, is giving increased attention to the distribution economies which are realizable when the physical phases of distribution are intelligently coordinated to expedite the flow of goods in commerce . . . Maximum economy can result only when there is standardization of fundamental elements at those points where one distributive activity connects with another . . . Benjamin Melnitsky continues his series of articles outlining standardization progress in each of the eight basic phases of distribution.

## PROGRESSIVE PORTS—PORTLAND . . .

Portland, Oregon, one of the nation's large fresh water ports, has spent considerable money since the war to improve its excellent harbor and its facilities to provide more efficient handling, storing and shipping for its customers . . . Its fine handling equipment and spacious warehouses demonstrate the value of integrating and coordinating the various distributive phases for maximum efficiency.

## Handling Problem

Sir:

We are in the process of investigating the possibilities of receiving paper bagged or sacked materials from vendors on expendable pallets or in some other manner that will lend itself to mechanical unloading. It sticks in the writer's mind that somewhere we ran across an article demonstrating how bagged material could be loaded and unloaded without using pallets of any nature. If we recall correctly, the principle involved was that a stack of bags was laid over a piece of four by four or a channel iron. The four by four or channel permitted the loading of the stack of bags mechanically, the four by four being removed after the loading operation had been completed.

Is it possible that such an article was published in **DISTRIBUTION AGE**? If not, do you have any knowledge of the working of such a system? It is appreciated that the outline of the method is very hazy. The point is that it seems necessary to get a line on some method of mechanical handling for the sacks that would not employ a pallet of any nature. In the possible absence of personal knowledge on your part of the article mentioned, could you refer the writer to any other source for this information?  
—"Interested."

Editor's Note:

The letter was referred to Matthew W. Potts, materials handling consultant, who replied as follows:

I do not recall an article describing this method of handling bags having appeared in the pages of **DISTRIBUTION AGE**. There are many experiments tried, and I might have seen the layout that you describe, but I have no definite recollection of it. In fact, I cannot even suggest what publication you might have seen it in.

However, let us take the problem under consideration, namely, the handling of bags without pallets. If you put the bags on four by fours to keep them off the floor sufficiently for loading them in the car or warehouse directly on the floor, it will be impossible to pick them up again with the fork truck.

Recently certain types of grabs have been developed that should be able to work on this type of handling operation. What success they have had in handling bags without pallets I do not know, but if the unit could be stacked in the proper position so that equal pressure would come on the bags in the middle, to keep them from falling out of the stack or unit, then I believe some sort of grab would be the answer to this problem.

We have heard a lot about expendable pallets . . . perhaps an expendable pallet would be the best approach to your problem at the present time, unless you desire to contact manufacturers of handling accessories specifically designed for use without pallets.  
—M. W. P.

## Compensation Plan

Sir:

It would be appreciated if you would forward to me copies of the April and May issues of **DISTRIBUTION AGE** which I have misplaced. I am interested in the article by R. M. Coburn entitled, "A Basic Compensation Plan for Salesmen."

—Leonard L. Pfaelzer, secretary and treasurer, Pfaelzer Brothers Inc., Chicago, Ill.

## Shippers Advisory Boards

Sir:

Regarding the article in **DISTRIBUTION AGE** for June, on the Shippers Advisory Boards, written by Henry G. Elwell, he has done a fine job and has clearly explained the functions and operations of these Boards in a manner which will appeal to the reader, whether or not the reader is familiar with our work. As the president of the Atlantic States Board, may I respectfully express our sincere thanks for this article and assure you it will materially assist our efforts to promote the type of shipper-carrier cooperation which exemplifies the activities of these Boards. It is just another example of the fine assistance and cooperation Mr. Elwell always renders the officers and members of the Atlantic States Board.

—R. F. Hogan, president, Atlantic States Shippers Advisory Board, New York.

## MH Bonuses

Sir:

Mr. Potts' article on Materials Handling Bonuses which appeared in the June issue of **DISTRIBUTION AGE** was very interesting and I believe would be of great service to materials handling supervisors throughout the country. Our own company has over 30 plants throughout the country and I would like to send a copy of your article to each of these plants. Would it be possible to obtain 35 tearsheets of your June article?

—E. F. Riter, materials handling supervisor, The Glidden Co., Cleveland 2, O.



# HEAVY-DUTY CHAMPION



## STANDARD OF THE HIGHWAY

FOR 16 YEARS more heavy-duty International Trucks have been bought by American commerce and industry than any other make.

International Model KB-8-1—Standard of the Highway—is but one example of the *complete* International heavy-duty line.

The International KB-8-1 was put in operation by first buyers early this year. Over-the-road truck operators and drivers everywhere acclaim it—

For its extra power to climb hills faster and maintain rigid schedules.

For its ability to carry more net payload, without exceeding its gross weight rating, than trucks with the same power but more chassis weight.

For every truck job there is an International of the right type, size and power, beginning with half-ton pickups and extending to giant off-highway trucks with GVW ratings of 90,000 pounds for logging, mining, oil field service, and construction work.

The International Dealer or Branch nearby will be pleased to show you how Internationals can serve you profitably.

Motor Truck Division

INTERNATIONAL HARVESTER COMPANY

180 North Michigan Avenue

Chicago 1, Illinois



Tune in James Melton on "Harvest of Stars!" CBS Wednesday Evenings



# INTERNATIONAL Trucks

Because it

**LASTS LONGER**

NAILABLE STEEL FLOORING for boxcar use is ribbed to minimize the weight of steel needed for high resistance to surface deflection. Channels are coated with a tough, non-spalling composition that fills the rib depressions providing a level, skid-resistant surface.



## \*NAILABLE STEEL FLOORING

### Cuts Railway Operating Costs... Relieves Shippers' Car Supply Problems

How often must shippers kick cars out empty because the floors aren't good enough for the particular outbound lading? How much time and money is spent switching boxcars—to spot them for loading according to the floor condition? The answers are *too often* and *too much*—because wood floors in most cars soon become damaged and car classifications must be reduced. Then cars must be shunted around empty until a load is available for which the floor is suited. This extra switching of Class B cars and rough-freighters not only cuts into shippers' car supply—it raises railway operating costs.

NAILABLE STEEL FLOORING eliminates much of this

\*PATENTS PENDING

extra switching because it stays in Class A condition longer. It isn't damaged by nailing, pinch bars, abrasive freight or loading equipment. It has the strength to support the largest fork trucks used in boxcars. NAILABLE STEEL FLOORING is built to last as long as the car itself and stay in Class A condition during that time. Here is an all-purpose floor that *stays* that way, that can make major savings in operating expenses and provide substantial relief for car supply problems.

### YOU SAVE 3 WAYS

In boxcars, flats and gondolas, the long life of NAILABLE STEEL FLOORING means lower repair and replacement costs as well as lower operating costs. And because it holds nails tighter and won't splinter, goods are safer on NAILABLE STEEL FLOORING. It saves you money in three ways—in operations, maintenance, and damage claims.



## GREAT LAKES STEEL CORPORATION

STEEL FLOOR DIVISION, PENOBSCOT BLDG., DETROIT 26, MICHIGAN  
UNIT OF NATIONAL STEEL CORPORATION

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# STRANGLER TRANSPORTATION



*Increased production without increased transportation is of no use to the nation . . . The transportation economies inherent in our magnificent highway system can be realized only when full use is made possible through more uniform state laws respecting truck dimensions and loads.*

By HARVEY C. FRUEHAUF

President  
Fruehauf Trailer Co.

**S**TRANGELY enough, although nearly everyone is concerned with achieving greater production, an alarming percentage of businessmen, as well as responsible public servants, seemingly fail to realize that an increase in production will be ineffective without a similar increase in transportation facilities.

For example, within the past year a serious shortage of freight cars rendered useless a large part of the grain crop. And today, in many sections of the country, we have a critical scarcity of petroleum products, due not only to inadequate production but also to a lack of facilities with which to move these products into the areas where they are needed.

When it comes to highway transportation, the situation is actually scandalous. Vehicle loads are restricted by law in many states to a point far below the capacity of either the vehicle or the road. Vehicle engineers and manufacturers are not permitted to design and produce equipment which they know would do a better job of hauling our country's products because of inhibiting laws imposed by politicians who have little or no technical knowledge of either vehicles or highways.

Our highways are fairly uniform throughout the nation. Specifications and materials used by road builders vary but little. Thus, roads have about equal ca-

capacity throughout the country, and yet vehicle load and length laws, supposedly based on the capacity of the highways, vary tremendously from one state to the next.

If it were not so tragic, it would be laughable to contemplate the hodge-podge, hit-and-miss, apparently devil-may-care "mess" of vehicle size and weight regulations in the different states. It's time to stop accepting any old vehicle size and weight figures just because they happen to represent a little increase over present state allowances.

Motor transportation is the servant of *all* the people. Highways have always been built primarily to facilitate the flow of commerce. The tax money with which to build and maintain our highways comes directly or indirectly from the people. Is it not the obligation, therefore, of the men at the head of the Public Roads Administration in Washington and at the head of the highway departments of the several states, to lose no time in seeing what can be done to give all our citizens still greater returns for their investments in roads and streets?

We simply do not begin to enjoy the capacity for service already built into our present highway system. "Bottleneck" laws are depriving the public of the full use of the highways. "Bottleneck states"—so called because they lie



across the paths of through interstate commerce—force transporters either to carry uneconomical loads on their vehicles or to make wide detours to avoid them.

This naturally increases the cost of the products handled. The net result is an increased cost of doing business that translates itself into an increased cost of living for all the people.

Fundamental to the American way of life is the uninterrupted exchange of goods and services between the peoples of the different states. Yet, in many instances, when a truck-trailer carrying vital goods crosses a state line, the formalities and red tape involved are almost as great as in passing from one country to another.

In true American fashion, let's see to it that the people are permitted to get full value out of the present highway plant in each state—and let's do this before we

(Continued on Page 82)

# Unit Load Motor Shipments



Loading palletized shipment in trailer.

**Before shippers can benefit from palletization and unit loading in motor transportation, some problems must be solved:**

1. Unit loads must conform to the requirements of truck transportation.
2. Truckers must be equipped to handle unit loads.
3. There must be more standardization in pallet sizes and types.
4. Railroad freight on pallets must be reduced.

By RANDALL R. HOWARD  
Special Correspondent

**I**T SEEMS that there are some real problems ahead before shippers can realize all the handling efficiencies to be expected from the palletization of motor truck shipments. Based on opinions expressed recently to the writer by Chicago shippers and truckers, here are some of these problems:

First, only comparatively few shippers or vendors are now offering freight shipments in a packaged or unit pack form which would enable a trucker who so desires to fully utilize palletized handling.

Second, some truckers are not equipped to handle palletized freight.

Third, palletized shipping is being somewhat hampered by lack of standardization in the sizes and kinds of pallets now in use.

Fourth, existing tariff rates are limiting the development of fully palletized shipping, and the return

to the shipper of his empty pallets.

Among Chicago motor truckers, there has been a steady increase in the use of pallets in the handling of their shipping. First, a considerable percentage of the Chicago truckers with the largest motor fleets and with suitable docks are now using pallets and fork lifts for across-the-dock freight handling. Also, additional large Chicago truckers are planning soon to begin the use of such equipment.

One of the Chicago pioneers in the use of fork lifts is the Olson Transportation Co. in their freighting operations chiefly between Chicago and Green Bay, Wis. They now have 10 fork lifts and have handled up to 18 million pounds of freight per week from their Chicago loading dock which is 60 ft. wide and 200 ft. long. They started with the use of 36 x 36 in. pallets, but now use the 36 x 44 in. size.

Another Chicago example is at the comparatively new terminal of Werner Transportation Co., who operate mostly between Chicago and Minneapolis and handle up to three million pounds of motor freight weekly. Their new loading dock, a part of which is temporarily leased out, is 300 ft. long and 66 ft. wide, including an eight ft. loading apron at either side. On the first day that they began using fork lifts, by 9:55 they had all but one of their for-Minneapolis trucks loaded, thus enabling them to cut three hours from their scheduled departing time. Other dock handling aids include 100 ft. of overhead trackage for a crane which will transfer a 10 ton load; a 100 ft. portable conveyor line with two curves of different degrees, and a belt conveyor which can be set to follow a ramp up from a heated basement storage room. Also, for the handling of refrigerated freight, they keep at their dock a



reefer trailer with an automatically controlled unit which on two hour's notice can provide any desired cooling or freezing temperature.

The newest Chicago example of mechanical motor freight handling efficiency is at the three-quarter million dollar terminal of Pacific Intermountain Express. The platform is 61 ft. wide and 309 ft. long, with docking space for 56 trucks. All of their motor freight is transcontinental, from Chicago and St. Louis through Denver and Salt Lake City to Oakland (San Francisco) and Los Angeles. Within a few weeks after the opening of the Chicago terminal, their freight volume had almost doubled. For dock handling they use pallets and eight fork lifts.

An example of much broader use of palletization in motor freight handling is the Kraft Foods Co., with Chicago headquarters and nationwide processing and distributing operations. About a year and a half ago they started a program to palletize their handling of both motor freight and rail shipping. They adopted as standard a four-way wood pallet of 32 x 43 in., and they now have more than 30,000 pallets in use. These pallets are made the base for numerous different types of unit packages, for the exchange of shipments among the many Kraft plants and branches in all parts of the United States. The company also is encouraging and offering to help many of their sources of materials and supplies also to palletize their shipments. The Kraft Co. is shipping palletized merchandise in all types of transportation equipment, including motor trucks and rail cars. Because considerable percentage of the Kraft palletized shipping is the exchange of fairly well balanced truck loads between their own production and distribution units, the company reports that the return of empty pallets back to needed spots has not been a very large company shipping problem. One of the reported most important efficiencies from the use of Kraft Co. pallets and fork lifts is the possibility of much higher warehouse stacking, thus increasing the usable storage

cutage of their warehouses by at least 30 percent.

Another conspicuous example of increasing palletization of motor truck shipping is at International Harvester Co., also with Chicago headquarters and nation-wide handling and distribution activities. During the past few years the company has done a great deal of research toward standardizing their pallets and palletization methods. This has included the development of a standard all-purpose palletizing set-up. The basic unit is a four-way double-faced 42 x 42 in. pallet. This base pallet is supplemented by a cover, a separator and additional sides to enable the assembly of a collapsible box-type pallet of an interlocking design, weatherproofed sufficiently to permit reasonable periods of outside storage. These basic palletizing parts have enabled the development of many different types of wired or banded unit loads to handle or transport the many thousands of individual parts, large and small, used in IH operations. The company also has encouraged and aided many of their vendors likewise to palletize their shipments. The company has stated that the 42 x 42 pallet size was selected "because the bulk of our shipments is made by motor

truck, and pallets of this size can be spotted side by side on standard highway trailers."

A walk through the loading dock of a Chicago motor trucking terminal usually will indicate that only a small percentage of the packaged LTL freight there assembled for truck transportation has been unit packed with a palletized base, or otherwise assembled or strapped in such manner that it could be entirely handled by means of a fork lift. Usually the chief exceptions will be a few heavy items mounted on some type of skid adaptable to fork lift handling.

From the viewpoint of the trucker, he of course must accept from the shipper the types of packages offered to him, assuming that the packaging seems good enough to afford the goods sufficient protection for safe shipping. Of course, the loading problem put up to the trucker might be quite different for full truckloads. But here again, the truckers report that shippers in general are not yet planning their full truck shipments in terms of kinds of unit loads that would be most suitable for complete fork lift handling, either with or without a pallet base.

*(Continued on Page 78)*

Loading a strapped palletized load on an expendable pallet via hand pallet truck.



# REASONABLE

**Average ton- or car-mile earnings are not proper criteria of the reasonableness of rates on specific commodities . . . In this article, Dr. Wilson discusses other determining factors which the ICC holds must be taken into consideration before a decision can be reached.**

By G. LLOYD WILSON

THE Interstate Commerce Commission has held that the ton-mile or car-mile earnings on all traffic, or more precisely the average of such earnings, are not to be considered as a proper measure of the reasonableness of rates on a particular commodity.<sup>1</sup> Other elements, the commission has held, must be considered in judging the reasonably compensatory character of rates. These considerations include the following:

1. The rates must cover and more than cover the extra or additional costs; that is, the "out-of-pocket" costs incurred in handling the traffic to which they apply.
2. The rates to be reasonably compensatory must be no lower than necessary to meet existing competition.
3. The rates must not be so low as to threaten the extinction of legitimate competition.
4. The rates must not be so low as to impose an undue burden on other traffic to make up the deficiency produced by these rates.
5. The rates must not jeopardize the proper return on the value of carrier property generally as contemplated by Section 15-A of Part I of the Interstate Commerce Act,—the so-called "rule of rate making" of the Act.<sup>2</sup>

**THE RULE OF RATE MAKING.** The provisions of the "rule of rate-

making" Interstate Commerce Act as now amended require that in the exercise of its power to prescribe just and reasonable rates, the Interstate Commerce Commission may give due consideration to all factors of rate making in order to insure the carriers a fair return upon the fair value of the carrier's property used in the service of the public.

The commission must give consideration to the following rate-making criteria, among others:

1. The need of adequate and efficient railroad transportation service, in the public interest.
2. The right of shippers to the lowest rates and charges consistent with furnishing such adequate and efficient railroad service.
3. The carrier's need of revenues which are sufficient to enable the carriers to provide adequate and efficient service under honest, economical and efficient management.
4. The effect of the proposed rates on the movement of traffic by the particular carrier or group of carriers for which the rates are made.

If a competitive situation between carriers of different type is shown to exist, it is not necessary for the rail carriers to await the development of actual competitive traffic via water carriers, for example, before taking steps to establish rates reasonably designed to meet the competition. The com-

mission has stated this in *Asphalt to Fulton and Arrowhead, N. Y.* in which it held, in part: "In circumstances . . . where the competitive movement has not occurred, but where the facilities for such movement are readily available at a cost which would make the use of such facilities feasible and desirable . . . we have held that it is not necessary for rail carriers who desire to meet such threatened competition to await the actual competitive movement."<sup>3</sup> This position confirms the position taken by the commission in a number of earlier cases.<sup>4</sup>

**NATIONAL TRANSPORTATION POLICY.** In establishing reasonable competitive rates the carriers must observe the principles stated in the declaration of the National Transportation Policy of Congress as stated in the Interstate Commerce Act as added to the Act by the Wheeler-Lea Transportation Act, 1940. This declaration of policy commits the Congress and the Interstate Commerce Commission as its legislative deputy to a policy of regulation of transportation based upon the fair and impartial regulation of all modes of transportation,—railroad, railway express, water, highway, pipe line, and auxiliary means of transportation.

The declaration of policy provides that the Interstate Commerce Act must be administered by the Interstate Commerce Commission in such a way as to achieve the following policy objectives:

<sup>1</sup> (238 I.C.C. 531, 534), 1940.

<sup>2</sup> See Rags and Paper to Newark, N. J. (208 I.C.C. 327), 1935; Gasoline From Superior, Wisc. (222 I.C.C. 487), 1937; and Crude Sulphur to Rochester, N. Y. (232 I.C.C. 284), 1937, and (225 I.C.C. 711), 1935.

<sup>3</sup> Linton Lumber Company v. B. and O. R. Co., (177 I.C.C. 231, 232), 1931.  
<sup>4</sup> Interstate Commerce Act, Part I, Section 15-A; and Transcontinental Cases of 1922, (74 I.C.C. 48), 1922.

# FREIGHT RATES

## REASONABLE RATE CRITERIA

A review of some of the leading cases decided by the Interstate Commerce Commission and by the Courts dealing with the lawfulness of minimum rates leads to the tentative conclusion that the following criteria have been used by the commission in determining the lawfulness of these rates under the Interstate Commerce Act.

1. The regulation must recognize and preserve the inherent advantage of each mode of transportation. This must mean the relative advantages of each type of carrier with respect to the quality of the service and the relative costs of performing the services, all factors of true cost considered.
2. The regulation must promote safe, adequate, economical and efficient service by each type of transportation carrier.
3. It must foster sound economic conditions in transportation generally and among the several carriers.
4. The regulation must be designed to encourage the establishment and maintenance of reasonable charges for transportation services,—charges which are without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices.
5. The regulation must be administered so as to cooperate with state regulation and the Commission must cooperate with the administrative officers of the states.
6. It must encourage fair wages and equitable working conditions in the various types of transportation carriers.

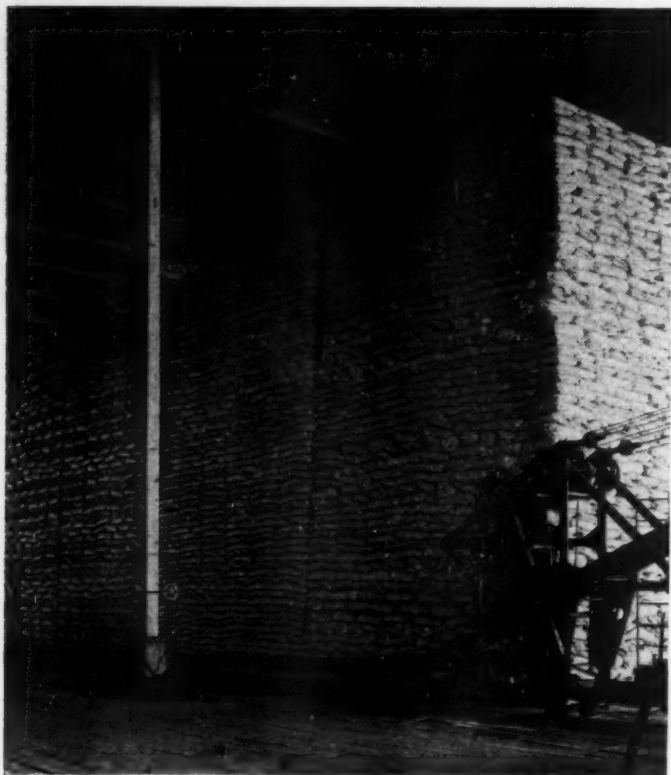
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1. The determination of whether or not the rates are reasonably compensatory; that is, covering fully allocated costs.
2. The consideration of whether or not the rates are unduly low so as to throw an undue burden on other traffic.
3. The determination of whether or not the rates are lower than reasonably necessary to meet competition.
4. The determination of whether or not the proposed rate is consistent with "the rule of rate making" of the Interstate Commerce Act and with the rate-making criteria of the national transportation policy as stated in the Wheeler-Lea Transportation Act, 1940.
5. The consideration of whether the rates will jeopardize the rate structure in an entire territory or upon a commodity or group of commodities.
6. The comparison of the rates proposed with those in effect upon the same commodities in the same rate territories, with the rates of other carriers of the same type, and with those of other types.
7. The consideration of the market value of the commodities upon which the rates are proposed.
8. The consideration of the value of the service, so as to determine what the traffic will bear. (\*)

(\*) Witters, Myron, *A Study of Minimum Reasonable Rates*, Interstate Commerce Commission, Washington, D. C., February, 1946, 86 pages, (Mimeographed).



# MULTIWALL PAPER BAGS



This huge pile, 58 tiers high, of International Paper Co's. multiwalls was assembled by the conveyor shown in foreground.

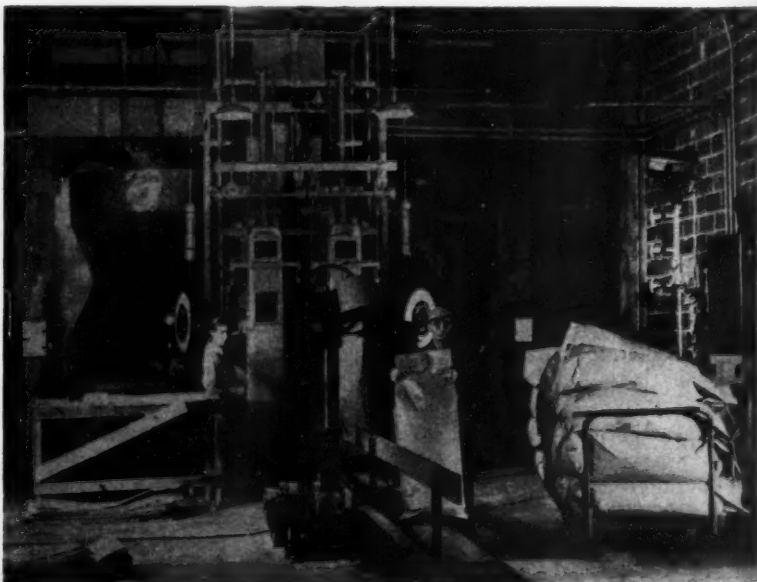
**Substantial distribution economies are resulting from the use of multiwall paper bags for bulk commodity packaging in many industries . . . Product protection and adaptability to mechanized handling, palletization and space-conserving storage are factors in accelerating this trend.**

By FRED HESTER  
Special Correspondent

**A** NEW trend in the packaging field is the development of uses for the multiwall paper bag. About 40 years ago A. M. Bates invented a new type of fabric bag for packaging salt. This container was filled through a tube-like spout which poured the material into a hole in one corner of the bag. The pressure of the contents when filled automatically closed the aperture. Somewhat later this invention was applied to kraft paper bags which were made of three or more layers for greater structural strength.

Today the efficiency of the multiwall paper bag is recognized by the manufacturers of over 400 commodities. Among the major products packaged are salt, cocoa, wheat, clay, flour, fertilizer, limestone, soap powder, soybeans,

One of the packaging machines mentioned in the article, developed by Union Bag and Paper Corp., automatically fills and closes these sewn open mouth multiwalls.





graphite, barytes, powdered alcohol, and non-metallic minerals.

There are now four basic types of multiwalls: pasted valve, sewn valve, pasted open mouth and sewn open mouth. Their names describe them exactly, pasted with a hard-holding adhesive or crepe tape, and sewn with paper and cotton twine. Each type has its peculiar advantages. The valve bag is finished at the manufacturer's—all the plant must do is fill it; pressure keeps it closed.

The open mouth bag must be pasted or sewn after being filled, but of course it keeps its contents slightly tighter and more insect-proof. Expensive materials, or chemicals that must be kept from moisture or atmosphere, and similar products are thought by some to be better protected in an open mouth bag. Cheaper materials, such as cement, etc., are admittedly not worth the more expensive container.

Some valve bags have been made with an exterior sleeve, which, tucked in by hand after filling, makes the bag tighter, but still it is not the equal of the well-closed open mouth, which one firm now closes with sewing and also tape pasted over it for maximum protection.

Since the invention of the new containers, and with the development of packaging machines, which automatically weigh, fill and close valve bags for shipment, and weigh, fill, close and stitch or tape open mouths, many industries are converting to these bags. The first large customers were the cement and rock product industries. Over three billion multiwalls have been used in the cement industry alone since 1924.

While multiwall bags are numerous in their advantages to many industries, these paper bags still have unsolved problems before certain additional commodities can be satisfactorily packaged.

Multiwall paper bags have a long list of advantages, according to the many satisfied customers. The favorable features vary in degree and importance with each concern, however. Users of these bags report that their pack-

aging production output has vastly increased since adopting this new method of packaging and unit packaging costs have been reduced.

The size and compactness of the package have facilitated standardization of handling operations and freight car loadings. Storage spaces in plants, in warehouses and in truck and railroad cars have been cut down. These factors have directly and indirectly reflected savings to these bag users.

In packaging certain commodities, paper bags are required to meet unusual circumstances. Excess heat or cold in temperatures ranging well below zero to several hundred degrees fahrenheit are necessary features common to packaging and storing certain products. Ability to withstand moisture or to absorb moisture may be a request of a particular plant owner. Ruggedness for withstanding pressure of packaging layer upon layer of bags in pallet unit loads is often considered. Constant movement and chafing of bags with the side walls of freight cars and trucks has required paper of additional strength.

Hungry insects and rodents have necessitated the use of special chemically treated paper for packaging wheat, flour, barley, soy-

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#### MULTIWALL USES

Intense rivalry is the order of the day in the packaging field, and fabric bag manufacturers admit they have lost ground in some fields. Cotton bag men concede the sugar-bag trade to the paper mills. OPA rationing was the finish of cotton sugar bags; too many one and two-pound paper units were packaged for ration purposes. The sugar people never went back to cotton after OPA ended. The big cement industry has long been in the paper mills' bag too. The first paper sack sales back in the early 1900's were to the salt and cement makers.

Paper makers estimate that around 1.6-billion multiwalls were sold last year. They expect a hefty increase in sales this year. They believe cotton and burlap bag prices are still too high. They point out, too, that a 10c-13c multiwall bag will bring a good price either as a second-hand bag or in scrap markets.—Business Week.

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beans and other products inviting to the insect world. Millions of dollars each year have been saved by this protective measure alone.

The following cases illustrate typical problems faced by concerns prior to considering this new type of packaging:

**Soap.** This case history reports the experience of a soap company in Brooklyn. Here soap was packed in 100 lb. drums. Rising drum costs, continuous customer complaints, labor shortages, and lack of storage space prompted an investigation of their packaging methods.

As a result of this study, the management decided that its products could be advantageously packaged in multiwall paper bags. After the purchase of a packaging machine, immediate results showed up. Container costs dropped from \$14 to \$2.60 a ton, a saving of 81 percent. Output is up 140 percent. One man operating the machine packs 60 100 lb. bags, or about 6,000 lb. per hour, as compared with 2,500 lb. per hour in drums. A three man crew handles the packaging and loading, where a five man crew was necessary before, and this permits the handling of up to 50 percent more loads. Altogether, packaging costs have decreased 80 percent. Storage space requirements have also been reduced 20 percent for filled bags over drums, while 100 empty multiwall bags take up only about four cubic feet of space.

**Chemicals.** Another case of changeover to multiwalls was undertaken in a chemical plant. Company engineers had noted a steady rise in the cost of packing anti-oxidants and accelerators used in rubber compounding. However, in considering multiwall bags, they were concerned with moisture content of chemicals, since a change of one-half of one percent was the maximum allowed.

Following a complete investigation the concern purchased two packaging machines and switched to 50 lb. multiwall bags. The officials of the company soon had their confidence thoroughly justified. Total packaging costs were

(Continued on Page 76)

# Packaging's Gray Market

*A huge gray market in damaged goods exists today, underselling established markets . . . Poor labeling, inadequate packing, and "legitimate" damage fill these marts with sub-standard goods. Are you packing for the gray market?*

By CHARLES L. SAPERSTEIN  
Packaging Consultant

**T**HERE is a vast gray market—almost inestimable in size—that receives and disposes of goods diverted from proper merchandising channels because of inadequate shipping preparation. The cost value of such goods can never be accurately estimated because with poor packing identification frequently is lost. As every carrier knows, there actually accumulates in every type of terminal—L.c.l., air, trucking, express, postoffices everywhere, on wharves and, saddest of all, on overseas piers receiving American-made goods—materials and commodities from watches to engines which cannot be traced either to consignee or consignor.

In due time and after every effort to trace has been exhausted, carriers are permitted to dispose of such goods by private sale or by auction. What the original invoice value of such wares might be is entirely lost. "What am I offered for this lot of canned goods?" "What am I offered for this lot of mixed women's and men's raincoats, as is?" "How much for these radio parts?" All day the auctioneer drones away, conferring ownership on dealers who capitalize on the proclivities of individuals and firms to start a shipment with a prayer and a flimsy piece of cord.

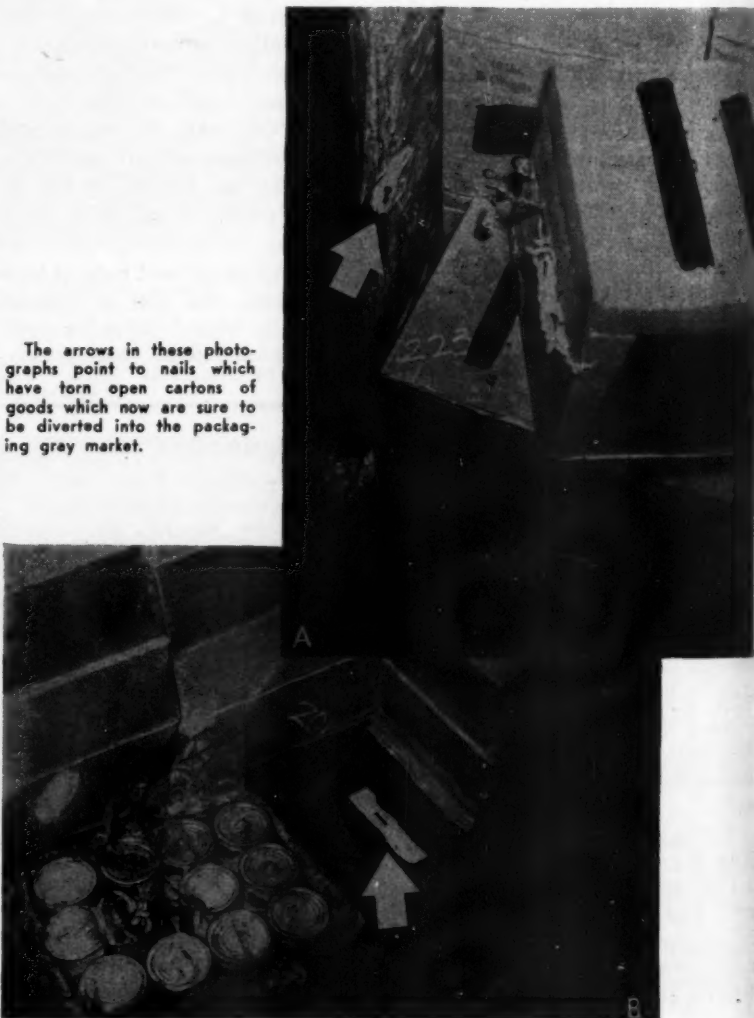
So much for the lost goods shorn of all outer identification or packing slip record. Even greater in volume is the sale of damaged shipments to which title is lost—through claim settlements. Here the carrier's adjuster or the shipper's own claim department or its

underwriter invites best offers from the gray market dealers. The designation—"gray market" is not intended as a reflection upon the dealers who engage in buying

and selling unclaimed and damaged goods. They perhaps fill a necessary purpose in merchandising.

Their activity becomes "gray

The arrows in these photographs point to nails which have torn open cartons of goods which now are sure to be diverted into the packaging gray market.



market" from the standpoint of the producer, manufacturer or dealer attempting to maintain a market level. How often in a national sales executive setup is there heard a conversation such as this: "Brown in Omaha reports he is having trouble selling our line at list prices because XYZ Distributor is selling at \$2.00 per dozen less than list. I suppose XYZ got hold of that load we made Border States Trucking pay for when the trailer became soaked in transit."

Much damage, of course, results from causes other than poor packing. Much also from carelessness in the packing room and from the use of false economy in container selection. Another type of damage—borderline in character—also results in damage claims. However, in this case, there is never a doubt in any expert shipper's mind that with a more secure container the damage would never have occurred. Certainly there may be some justification in assuming that the container receives rough handling *en route* or while being handled at the terminals. But the experienced shipper in planning his container leaves some margin for safety and thus prevents damage due to negligence of the carrier even before it happens.

A shipper suffering damage to his goods *en route* is all too prone to demand full compensation for his shipment. He should remember that the carrier or insurance company is not going to take such goods after payment and remove them to some vague graveyard for fallen shipments where they will be buried. No, it is logical that he will try and offset his loss as much as possible by selling to those individuals who traffic in damaged lots of goods. There is one, or more, in almost every line in every major market. They constitute one of America's gravest gray market situations because of the manner in which they demoralize price standards with sub-standard goods. Their warehouses are the Potter's Fields for goods sent forward in sub-standard shipping containers.

Naturally, there are instances of complete damage where the ship-

per is justified in making full claim and this is his only recourse. When the damage is less than complete and there is some salvage value, the shipper may well weigh the advantages of his making disposition of the goods, as compared to the adjuster's taking possession and feeding them into gray market channels.

Goods find their way to the dealers in less-than-list-price lots through disposal sales of "unclaimed" shipments as well as the adjuster's sales of lots obtained on settlement of "damaged" claims. Fundamentally, both sources are similar, except unclaimed freight is amassed by those who move smaller packages—the postoffice, the express company and truck distributors of small parcels. However, in 99 cases out of 100, the reason any article finds itself unclaimed is failure of the wrapping or container with the result that goods became separated from their identification. Much stuff in the unclaimed divisions, of course, becomes claimed as a result of tracers instigated by either the shipper or the intended recipient. But after six months, the accumulation at central receiving points becomes so great that auction or other disposal sales must be held.

The product which is carefully wrapped inside a set-up or light corrugated box may soon find itself in the bottom of a mail sack with wrapping and identification irretrievably separated. The reason is that failure to fill out the light container has permitted the package to collapse, the cord to slip off and the wrapping to become

lost. The product which, let us say, may roughly resemble an automobile part is thrown into a bin marked "automobile parts." Soon the bin and a thousand more like it are filled with every conceivable object found in transportation. This scene takes place not in one postoffice, but in central postoffices in every postal district of the country.

Two days before each six months auction, dealers inspect the lots and prepare for the extremely fast-moving auction, for obviously if only one minute is devoted to each lot by the auctioneer, 15 or 16 straight hours would be needed to cover the sale. The gray market jewelers will stay for hours for the chance to bid on a lot of watches, perhaps 50 or 100 famous brands and unknown makes, fine movements and obviously shoddy ones, or to bid on an overflowing tray of costume jewelry, rings and other lots of interest in that trade. The dealer in janitor supplies has a field day in brooms, brushes, mops. Books sold by mail or sent by individuals will overflow into several lots. Candy, famous brands and unbranded types—already aged and stale by having been retained for a minimum of six months—finds some dealer who will sell without conscience in competition with fresh goods.

Express unclaimed freight sales, underwriter's "salvage" sales, adjusters' disposal of damaged freight resulting from claim settlements, repeat the picture of the postal "Nixie" division auctions—but on vastly larger scales. Branded lines of food, particularly, suffer from the spectre of the gray market. Quite often the fault arises from the right hand of an organization not realizing what the left is doing. The sales department has a car rejected by the buyer because a large number of dented cans or crushed boxes showed up on arrival. The sales department, desirous that a large distributor and buyer be satisfied, is interested only that a replacement shipment goes out at once.

The traffic manager, armed with evidence that the material went out in good order, enters claim

(Continued on Page 77)

### Packaging Exposition

The Third Annual Industrial Packaging and Materials Handling Exposition of the Industrial Packaging Engineers Assn. will be held Oct. 5-7 at the Hotel Sherman, Chicago. In conjunction with this meeting will be held the Packaging and Materials Handling "short course," sponsored by the association and the University of Illinois. This will begin one day before the regular meeting and continue till Oct. 7. Highlights of the show will include the protective packaging competition, a special "export award," the awarding of certificates by the University for attendance and participation of students, and special sessions on various topics of packaging and handling.





# PROGRESSIVE PORTS

## ... this month: CHARLESTON

**Charleston, which hauled 125 percent more carload freight into its port last year than in 1946, is one of the South Atlantic's fastest growing ports . . . Transportation, handling, warehousing and other phases of distribution are integrated to provide fast, efficient service for shippers.**

**C**HARLESTON, S. C., the South Atlantic's fastest growing port and one of the nation's finest natural harbors, is seven and a half miles from the open sea, at the junction of the Ashley and Cooper Rivers. It is practically land-locked and free from ice, dangerous currents and strong winds, with a broad, 35 ft. deep channel leading to the Atlantic. Dredging is underway at present to maintain this channel's depth and a width of from 400 to 1,000 ft.

Four railroad systems serve Charleston, the Southern Railway, the Atlantic Coast Line, the Seaboard Air Line and the Charleston & Western Carolina Railway.

Numerous motor carriers truck their cargoes in and out of the city and air express and aircargo services are available.

The city has 55 piers, wharves and docks in its port area, plus a Todd shipyard and a navy yard. A 13 mile belt line railroad serves all its principal docks in the downtown area and connects with the above lines. The State Terminals have a 300 car rail classification yard, and all warehouses are served by both rail and truck loading platforms.

The State Ports Authority has recently acquired the 20 million dollar former Charleston Port of Embarkation,\* north of the city, with the finest dock facilities in

the Southeast. A modern quay-type concrete pier, 40 ft. wide, has a berthing front of 1,938 ft. Rail cars come out along the double marginal tracks and can be loaded or unloaded directly at shipside. Adjacent warehouses provide more than a million square feet of storage space. These warehouses are divided into 16,000 sq. ft. sections, with concrete floors, tile walls, and modern dry sprinkler protection. Shipside headhouses offer a quarter million square feet in which to assemble cargo for direct loading. In addition, more than 20,000 sq. ft. of open storage space is available on a concrete apron at shipside, and more space in open storage yards in the terminal area.



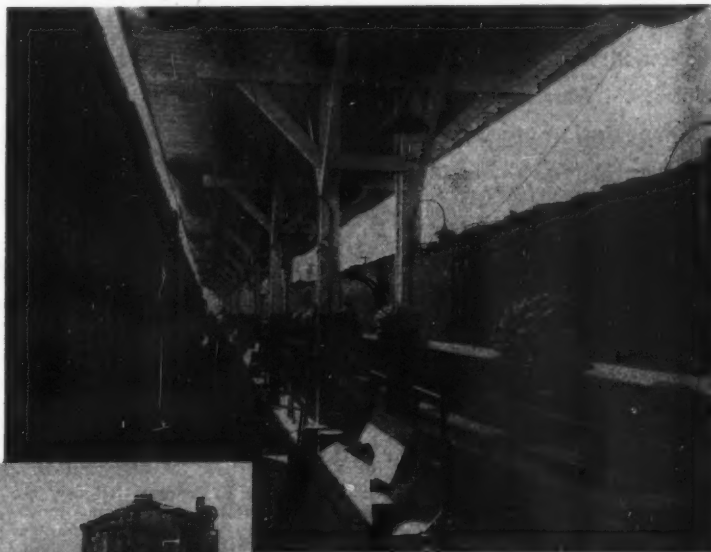
Charleston uses the most modern materials handling equipment to move its cargoes rapidly in and out. It is especially proud of its stiff-leg derrick of 120 tons capacity, largest in the South. Locomotives and crawler type cranes provide flexible lifting capacity. Modern switching locomotives move busily about the terminal area, and tractors and trailers, fork trucks and lift trucks, ranging from 6,000 to 16,000 lb. capacity, are available. Pallet storage is common, providing protection for stored cargo as well as quick and easy handling. A packing plant provides a special service for shippers desiring packaging and crating of cargoes.

Charleston boasts also the Southern Railway's coal tippie, the only one on the Atlantic Coast south of Norfolk, which last year shipped 1,647,250 gross tons, a 28 percent increase over 1946. This tippie is located at the end of a trestle which juts out 3,800 ft. into deep water. The average ship takes about 200 carloads of coal, so the cars must be loaded quickly. A switch engine pushes a car down the long pier and into position. A clamp holds it while heavy machinery lifts and tilts it. The coal pours from the car down a huge dumping pan which forms the end

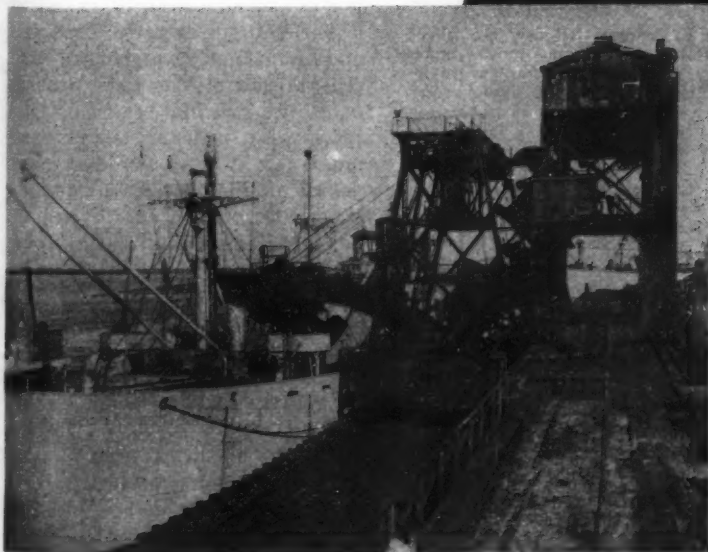
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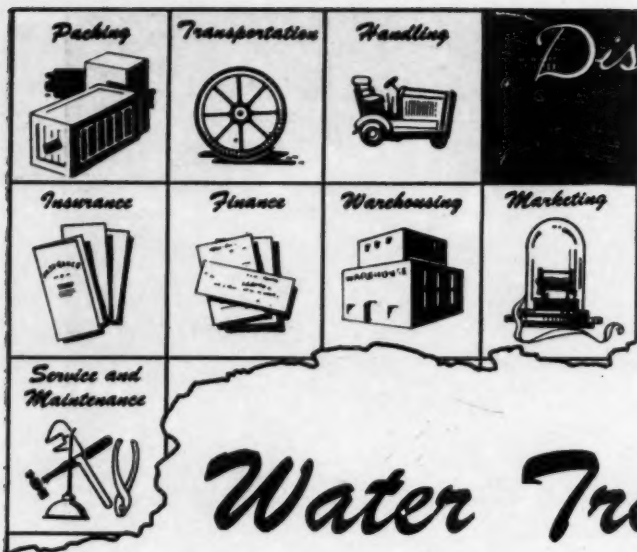
Aerial view of the 20 million dollar terminals operated by the Ports Authority, which provide more than a million square feet of warehouse space.



Mechanized conveyors at the Southern Railway's banana pier carry bunches of bananas from the holds of boats directly to waiting refrigerator cars.



The Southern Railway's coal tippie, only one south of Newport News, which last year exported 1,647,250 gross tons of coal.



## Distribution STANDARDS and SPECIFICATIONS

# Water Transportation

Outside of the excellent packing and packaging standards now in existence, there are few standards in water transportation . . . More cooperation on the part of shipper, forwarder, transportation agency and carrier is needed for more efficient transportation.

By BENJAMIN MELNITSKY

**T**HE MECHANICS of distribution—the connection between insurance and transportation, between financing and warehousing, between handling

and marketing—often are difficult to visualize. Rarely can distribution's diverse components be seen as an integrated whole. However, in the area of a few city blocks

at the tip of Manhattan Island, this interaction is exposed to view somewhat as are the gears of a glass-enclosed clock in a jewelry store window display. Side by side in towering office buildings are marine underwriters, financial firms, ship operators, exporters and importers, warehouses, and federal control agencies. Near at hand are marine terminals and piers with railroad sidings and motor truck ramps; ocean-going vessels nuzzle the Manhattan shore; materials handling equipment operates at full blast. These and other phases of distribution complete the integrated picture. Here in microcosm is the one phase of distribution which represents fully 10 percent of the national income and is responsible for the employment of over five million American workers.

It takes little perspicacity to see that the American Merchant Marine is by no means the strong-

The official of a large ship line stated recently that his company lost over two million dollars in 1947 because of poor packaging of export cargoes. A spokesman for one of the trade associations in the marine transportation industry estimates that losses due to inadequate packaging and poor marketing practices are thirty times greater since the war. Such tremendous losses are encountered neither in rail shipping nor in other carriers.

Assuming that the present excellent system of railroad standards for packing and packaging did not exist and that both rail and water carriers operated, as do the latter, with no significant degree of standardization—even in such a situation the damages to rail freight would be infinitely smaller. The reason is simple. A shipping container to travel by rail will have the following minimum handling points: 1. from packing line to storage area in shipper's plant, 2. from plant storage into freight cars, 3. from freight car to recipient's plant.

For a container to travel overseas there would be in addition to points one and two the following: 3. from freight car to lighter, 4. from lighter into ship's hold, 5. from hold to lighter at the foreign port, 6. from lighter to dock, 7. from dock to land carrier, 8. from there to recipient's plant. Needless to say, the handling steps could be multiplied many times over at each of the above eight points.

The very fact that water shipments are handled at least twice as often as rail shipments indicates clearly that the possibility for damage to cargo is at least double. Yet, and this is quite paradoxical, the shipments by rail are thoroughly standardized; whereas those by water are not. An analogous situation might be one wherein clerks and office help wear steel-capped safety shoes while the machine shop personnel walk about in sandals.

Water transportation, more than any other form, needs the steel-capped safety shoe protection of standards. It can only be hoped that the American Merchant Marine buys such "shoes" before it is badly crippled.—B. M.

est phase of United States economic might. Conflicting, vapor-escient national policy, labor problems, Congressional vacillation, inefficiency and waste have contributed to the present unsound and unhealthy status of overseas water transportation. Readers are familiar with these problems which have been so well delineated in the pages of this magazine. There is hardly a need for a resume of this sad state of affairs.

Primarily, water transportation is unique among other phases of distribution in the degree to which it is subject to powerful foreign competition. Even now, after much of the world's shipping was destroyed during World War II and after this country amassed a merchant fleet of unparalleled size, U. S. vessels carry less than 50 percent of the national import and export business. Before the war this figure was about 25 percent. Thus, every attempt at standardization for American shipping is limited by the lack of standards for foreign vessels or by the use of different standards on these vessels. Should American ship owners insist that cargo be prepared according to their standards, shippers, hesitating to spend extra money for proper packaging, might readily switch their business to foreign lines where the restrictions of the standard would not exist. Should all American vessels adopt standard handling methods, the efficiency of the move would be limited, because foreign carriers would not necessarily follow suit. This one factor does not entirely explain away the lack of standardization, but its significance cannot be overlooked. The only logical solution is the development of international marine standards. Unfortunately, the International Organization for Standardization, which is the world-wide standards body, has not undertaken the standardization of water transportation. Present indications are that no such move is contemplated. The other possible standards source is the Inter-governmental Consultative Maritime Organization, an organ of the United Nations, whose charter was ratified in Geneva Mar. 6, 1948 by 18

#### CHECK-LIST OF STANDARDS FOR WATER TRANSPORTATION

American Iron & Steel Institute, 350 Fifth Avenue, New York, N. Y. Packaging, marking and loading methods for steel products for overseas shipments, 1944, 223 pp. il. ....	\$2.50
National Fire Protection Assn., 40 Batterymarch St., Boston 10, Mass. NFC 1—National fire code for flammable liquids, gases, chemicals, and explosives. (Includes sections on: flammable liquid storage and handling; oil and gasoline burning equipment; liquified petroleum gases; utilization of flammable liquids; gases; refrigeration and fumigation; explosives and nitrocellulose materials; tables; flash point tests; and appendix.) 624 pp. 1948 edition ..	\$4.00
A111—Marine fire hazards. A—Filling oil tanks of explosive or toxic gases .....	\$0.05
C—Storage of hazardous commodities .....	\$0.05
A111a—Motor craft, fire protection regulations for .....	\$0.05
A111b—Marine terminals, Operation of .....	\$0.10
A120c—Vessels in course of construction and during lay-up, Prevention of fire on .....	\$0.10
L5b—Petroleum wharves .....	\$0.10
D44b—Shipyard fire protection .....	\$0.20
E10c—Motor craft (fire record) .....	\$0.10
Associated Coöperage Industries of America, Inc., 408 Olive St., St. Louis 2, Mo. The wooden barrel manual .....	FREE
Society of Automotive Engineers, 29 West 39th Street, New York 18, N. Y. AS338—Shipping containers, engines, components .....	\$0.25
National Foreign Trade Council, 111 Broadway, New York 6, N. Y. Revised American foreign trade definitions, 1941 .....	\$0.10
Bureau of Supplies and Accounts, Navy Dept., Washington 25, D. C.; the Army; or the Superintendent of Documents are sources for the following list of Joint Army-Navy (JAN) specifications and Joint Army-Navy packaging instructions (JPI). Items not starred (*) are for packaging and packing for overseas shipment. JAN-P-140—Adhesives, water-resistant, case liner. JAN-P-101—Adhesive, water-resistant, for sealing fiberboard boxes. JAN-P-117—Bags, interior-packaging. JAN-P-137—Bags and Sacks, textile and paper (for subsistence). JAN-P-113—Bags, shipping, textile-and-paper-laminated. JAN-P-122A—Barrels, slack. JAN-P-107—Barrels, tight. JAN-P-131—Barrier-Material, moisture-vapor-proof, flexible. JAN-P-138—Barrier-Material, utility, noncorrosive, paper. JAN-P-125—Barrier-Materials, waterproof, flexible. JAN-P-208A—Batteries, storage, automotive and Navy portable. JAN-P-108—Boxes, fiberboard (V-board and W-board), exterior and interior. JAN-P-133—Boxes, set-up, paperboard. JAN-P-105A—Boxes, wood, cleated, plywood. JAN-P-138—Boxes, wood, fiberboard-lined. JAN-P-104A—Boxes, wood, nailed. JAN-P-103—Boxes, wood-cleated, solid-fiberboard. JAN-P-120—Cartons, folding, paperboard. JAN-P-102—Composition Topcoating Materials, bituminous. JAN-P-115—Compound, sealing, dipcoating. JAN-P-124A—Containers (cans, pails, and drums), metal (for other than subsistence items). JAN-P-104—Crates, sheathed, wood, nailed. JAN-P-132—Crates, unsheathed, wood, nailed (for maximum net load of 2,500 pounds). JAN-P-110—Drums, metal, 55-gallon (for other than petroleum products). JAN-P-112—Drums, plywood. JAN-P-207—Electrolyte, storage-battery (in U. S. 1-gallon or imperial 1-gallon bottles). JAN-P-196—Engines, ground, air-cooled (32-horsepower and under)—spare parts for. JAN-P-100—General specification. JAN-P-134A—Kegs, slack. JAN-P-139—Plywood, container-grade. JAN-P-116—Preservation, methods of. JAN-P-118A—Sacks, paper, shipping, multiwall. JAN-P-127—Tape, adhesive, pressure-sensitive, water-resistant. JAN-P-128—Tape, water-resistant, gummed. JPI-2—Preservation, Packaging, and Packing of ground air-cooled Engine Units (0-32 hp). JPI-3—Valves, Fittings, and Flanges for piping. JPI-4—Packaging and Packing of Spare Parts for internal combustion Engines. JPI-7—Packaging and Packing of Hardware, builders' and pole-line. JPI-9—Machine Tools and accessory parts. JPI-10—Preparation of metal-working Machinery for shipment. JPI-12—Packaging and Packing of Hand Tools. JPI-13—Packaging and Packing of Life Preservers. JPI-14A—Packaging and Packing of Electrical Equipment and spare parts (electronic, electrical, and electro-mechanical). JPI-15—Bulk shipment: Nails. JPI-17—Packaging and Packing of Dynamite (ammonia, ammonia-gelatin, and gelatin types) (in cartridges). JPI-19—Packaging and Packing of Typewriters. 39P-16a—Army-Navy general specification. (Army number 100-14A.)	
Commanding General, Air Technical Service Command, Wright Field, Dayton, Ohio. AN-8-17—Boxes, general specification for—, for export shipment. AN-P-81—Packaging and Packing of Aircraft Material in Steel Shipping Containers. AN-P-30-2—Packaging and Packing: Aircraft Propellers (for Domestic and Overseas Shipment). AN-P-77—Packaging and Packing of Self-Sealing Fuel and Oil Cells in Reusable, Collapsible Boxes. AN-P-66a—Packaging of Batteries, Storage, Shielded, Aircraft (Charged and Dry—Uncharged and Moist). AN-P-62b-1—Packaging of Lightweight Aircraft Accessories. AN-P-13a-1—Preservation and Packaging: Metal Parts Equipment (General Specification for). AN-P-36a-1—Preservation and Packaging of Bearings and Bearing Parts.	
Superintendent of Documents, Washington 25, D. C. Shipping tags, paper, 1939. 15 p. il. (National Bureau of Standards, Simplified Practice Recommendations 93.) Catalog No. C13.12/1: 93/2 .....	\$0.05
Standardization of packages. 1940. 128 p. (Standards Miscellaneous Publication 145.) Catalog No. C13.10: 145 .....	\$0.10
Manual for inspection of damaged shipments. Rev. 1944. 45 p. il. (Container Coordinating Committee.) Catalog No. P332.4806: Sh 6/944 .....	\$0.10
Laws relating to shipping and merchant marine [Sept. 7, 1916—Mar. 24, 1945]. 1945. 554 p. (House of Representatives.) Catalog No. Y 1.2: Sh 6/945 .....	\$0.60
Customs regulations of United States. 1943 ed. [Reprint with changes 1946.] various paging. (Customs Bureau.) Catalog No. Y 17.9: 943/rev.—2 .....	\$2.25
Issued in loose-leaf form. Export and import practice. 1938. 306 p. il. (Foreign and Domestic Commerce Bureau, Trade Promotion Series 175.) Catalog No. C 18.27: 175 .....	\$0.50
Modern export packing. 1940. 536 p. il. (Foreign and Domestic Commerce Bureau, Trade Promotion Series 207.) Cloth. Catalog No. C 18.27: 207 .....	\$1.25

(Continued on Page 32)



nations including the United States. As plans are now drawn up, a Maritime Safety Committee will be established "to provide machinery for cooperation among governments in the field of government regulation and practices relating to all kinds of technical matters affecting shipping engaged in international trade, and to encourage general adoption of the highest practicable standards in matters concerning maritime safety and navigation efficiency." It is the opinion of informed persons in shipping that standards and specifications developed by this committee concerning safety measures and operational procedures will be adopted even by non-members, because insurance rates will quickly discriminate against shipping that fails to conform to these standards. The degree to which this prediction will be realized remains to be seen. Unquestionably, it will be some time before such standards are forthcoming. Until such time, the international nature of shipping will be a potent force operating against standardization.

The tremendously wide variety of goods and materials carried aboard ships is a second standards-limiting factor. Railroads carry many different commodities, but there are definite limits to what can be handled by rail. The same is true for highways and air transportation. Water carriers, on the other hand, can and do move almost every type of goods from pins and needles to locomotives and entire factories. It can readily be seen that standardizing the handling, packing, packaging and storing procedures for these diverse cargoes is a tremendous task requiring a gigantic organization equal to or even greater than the standards groups within the Assn. of American Railroads. Needless to say, there is in existence no such source of shipping standards. Present associations of ship owners, insurance underwriters, and others in the field of marine transportation are not equipped for the job. The only unified attempt at accomplishing this uninviting standards task was undertaken by the armed services

STANDARDS CHECK LIST—(Continued)	
Modern ship stowage, including methods of handling cargo at ocean terminals. 1942. 719 p. il. (Foreign and Domestic Commerce Bureau, Industrial Series I.) Cloth. Catalog No. C 18.225:1	\$1.25
Regulations for transportation of explosives and other dangerous articles by land and water in rail freight, express, and baggage services, and by motor vehicle (highway), and water, including specifications for shipping containers. Revised, effective Jan. 7, 1941. 1940. 218 p. (Interstate Commerce Commission.) Exhausted.	
—Supplement No. 1 to above. 1943. 78 p. il. (Interstate Commerce Commission.)	
Catalog No. IC 1.12/2: Ex 7/13/94/supp. 1	\$0.25
Baling. 1927. 18 p. il. (Foreign and Domestic Commerce Bureau, Domestic Commerce Series 16.) Catalog No. C 18.28:16	\$0.10
Cooperage and steel barrels. 1927. 32 p. il. (Foreign and Domestic Commerce Bureau, Domestic Commerce Series 13.) Catalog No. C 18.28:13	\$0.10
Fiber containers. 1927. 19 p. il. (Foreign and Domestic Commerce Bureau, Domestic Commerce Series 10.) Catalog No. C 18.28:10	\$0.10
Wire-bound boxes. 1927. 22 p. il. (Foreign and Domestic Commerce Bureau, Domestic Commerce Series 12.) Catalog No. C 18.28:12	\$0.05
Preparing shipments to:	
British countries (except Canada), documentary requirements and customs regulations. 1929 ed. 218 p. il. (Foreign and Domestic Commerce Bureau, Trade Promotion Series 154, revised.) Catalog No. C 18.27:154/2	\$0.25
Canada, documentation and customs requirements. 2d revision. 1936. 44 p. (Foreign and Domestic Commerce Bureau, Trade Promotion Series 91.) Catalog No. C 18.27:91/3	\$0.10
Cuba, documentation and consular and customs requirements. 1935. 24 p. (Foreign and Domestic Commerce Bureau, Trade Promotion Series 163.) Catalog No. C 18.27:163	\$0.10
Explosives and other dangerous articles on board vessels. 385 p. il.	\$1.50
Board of Underwriters (Marine), 99 John Street, New York City. (Their standards are included in "Modern Ship Stowage" listed above.)	
Foreign Commerce Department, Chamber of Commerce of the United States, Washington 4, D. C. Doing import and export business	\$1.50
Foreign Commerce Handbook	\$0.25
U. S. Department of Agriculture, Production & Marketing Administration, Washington 25, D. C. Export Packaging Specifications, 1946.	
Commandant, United States Coast Guard, U. S. Treasury Dept., Washington, D. C. Tank vessel regulations, June 16, 1947. CG 123.	
General Rules and Regulations for Vessel Inspection; Ocean and Coastwise, May 1947. CG 170.	
General Rules and Regulations for Vessel Inspection; Rivers, May, 1947. CG 185.	
General Rules and Regulations for Vessel Inspection; Bays, Sounds, and Lakes other than the Great Lakes, July, 1947. CG 189.	
General Rules and Regulations for Vessel Inspection; Great Lakes, May, 1947. CG 186.	
Marine Engineering Regulations and Material Specifications, NAVCG 115.	
Load Line Regulations, June, 1947. CG 176.	
The United States Navy Department, Bureau of Supplies and Accounts, Storage Division, SWX, Washington, D. C. Aerological and Navigational Instruments, Navy Handbook on Packing and Materials Handling (NAVSANDA No. 11) 87 pp., 1944.	
United States War Department, Washington, D. C. Equipment and Parts, Processing and Packing of Transportation Corps (SB-55-14), 43 pp. Dangerous Chemicals, Storage and Shipment of (TM3-250) 128 pp., 1940.	
Engineer Field Maintenance Office, Columbus, Ohio. Spare Parts for Engineer Equipment, for Export Preparation of (TM5-9713), 89 pp., 1943.	
Guaranty Trust Company of New York, 140 Broadway, New York 15, N. Y. A Review of Export and Import Procedure, 63 pp.	FREE
British Standards Institute (U. S. Sales Agent: American Standards Association, 70 East 45th Street, New York, N. Y.)	
1133 British Standard Packaging Code	\$1.00
Supplement 2 to British Standard 1133	\$1.00
Supplement 3 to British Standard 1133	\$0.75

during World War II. Of these standards, more later.

Variable handling facilities at different domestic and foreign ports further complicate the development of standards. Where port facilities are poor or non-existent, the standard for export goods will have to be different from that at ports where handling is thoroughly mechanized.

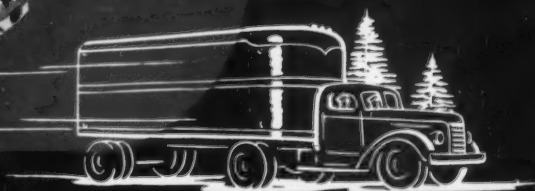
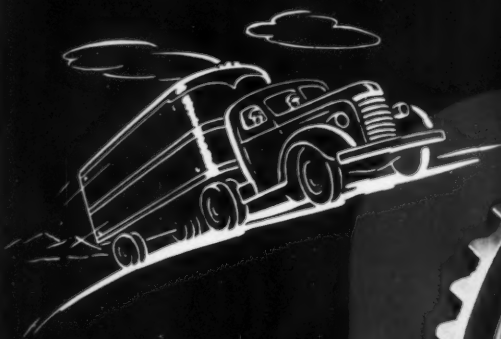
Additional factors include: goods intended for domestic markets may frequently be sidetracked into foreign commerce with the result that repacking in proper export containers is often impossible; a good percentage of American export-import business is conducted by small, often marginal firms who have neither the facilities nor the desire to standardize

their overseas shipments; vacillating government policy has precluded the development of a firmly entrenched merchant marine, which, in the final analysis, is the only basis for efficient standardization.

A brighter side of the picture is the existence of excellent military specifications which can be and are being used for non-military purposes. The series of joint army-navy (JAN) standards which were developed during the war represent the cooperative efforts not only of military experts but also of trade associations in the packaging field and of many individual manufacturers and users of packaging materials. The entire series of JAN packaging

(Continued on Page 62)





## Eaton Planetary Construction Makes Shifting Easy at all Speeds

The design and construction of Eaton 2-Speed Truck Axles permit the planetary parts to turn at slow speed. This allows smooth, easy, clash-free shifting from one range to another at all truck speeds. The result—proper shifting for most efficient and economical operation, minimum driver fatigue, and longer life for the entire truck. Outstanding performance records are proof of Eaton quality and design. See your truck dealer for complete information.

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EATON MANUFACTURING COMPANY

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WHERE IT'S NEEDED

# WOOD

WHERE IT'S NEEDED

FAIRBANKS STEEL-FRAMED TWO-WHEEL TRUCK is available in 20 sizes and types to meet specific job requirements.

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● Your truck costs go down and your men get more done in less time with Fairbanks Steel-Framed Hand and Platform Trucks.

The reason is simple. Fairbanks has effectively combined the structural advantages of steel and wood to provide hand and platform trucks that stand up under all kinds of punishment in service . . . that have shock-absorbing qualities which cushion heavy loads, dampen vibration, reduce operator fatigue.

Like all Fairbanks Trucks (over 90 basic designs with hundreds of variations) each of these Steel-Framed trucks is developed from on the job experience to put the maximum speed and ease into specific types of load-handling. For example, the "Commander" Steel-Framed Platform Truck shown above comes in 20 sizes from 24" x 42" to 36" x 72", with 3 platform heights (18", 14", 9½") and Tilt or Non-Tilt running gear.

Full information on any one or the complete line of Fairbanks Trucks may be had from any of the offices listed below.



American Industry Rolls on Fairbanks Trucks

THE **fairbanks** COMPANY

520 Atlantic Avenue  
Boston 10, Mass.

15 Ferry Street  
Pittsburgh 22, Pa.

748 M & M Building  
Houston 2, Texas

222 Division Street  
Bama, Ala.

# Integrate Handling



By **MATTHEW W. POTTS**  
*Materials Handling Consultant*

*Materials handling is a top management concern since departmental techniques and equipment must be coordinated for greatest overall efficiency.*

**M**ATERIALS handling needs more recognition from top management if departmental methods and equipment are to be integrated into a unified system. When the selection of equipment is left at the foreman or superintendent level, the tendency is toward a piecemeal solution of a number of problems which should be solved on a plant basis. A recent survey shows a lack of proper coordination in both large and small plant organizations in the matter of materials handling. In some departments for example, a foreman or superintendent who has recognized the need for better handling methods may purchase equipment to bring about a more efficient setup within his own department without taking into consideration the needs of departments contributing to his production, or the needs of departments to which he supplies materials or has to send finished products for packing and shipping.

It is not easy to ascertain why top management allows such conditions to exist, but from the writer's point of view it seems to be the result of a lack of proper evaluation of materials handling, and the failure to utilize a materials handling supervisor with authority to oversee installations in all departments.

Recently, in making a survey in a large production plant, the writer was amazed at the conditions existing. This particular industry produces a precision product. It recognizes the importance

of adequate servicing and the need for interchangeability of parts. However, within its own manufacturing departments, there is an entire lack of standardization. This has a direct bearing on production costs because of the inability to set up adequate materials handling methods.

For example, this concern uses a number of tote boxes or racks in which semi-finished and finished products are handled. These racks are well-designed for the work to be performed, but since they were developed at a departmental level, the variety of sizes and types is out of all proportion to overall requirements, and there is a decided lack of interchangeability in the simple matter of dimensions.

Since it is necessary for products to go from department to department and pass through a series of production storerooms, one will readily recognize the difficulty of stacking and handling the assortment of sizes which has resulted from this departmental level planning.

Even today, after the need for adequate materials handling is recognized, the confusion resulting from too much departmental and too little centralized planning continues. This particular plant could reduce its handling costs immediately if it could substitute standardized equipment for its present heterogeneous assortment of racks, tote boxes, etc., but the investment in existing equipment is a roadblock. At present while the situation cannot be cured by sweeping changes, it could be

remedied. No attempt is being made to remedy the situation through inter-departmental agreement on designs for standardized equipment with a view to gradual introduction into use. The materials handling engineer has consistently advocated such a step but he has been unable to get the backing of top management.

The lack of centralized planning for materials handling is an all too common fault in industry and distribution. Many new plants in which one would expect to find an integrated handling system, are a hodge-podge of departmental thinking. Often seemingly obvious facts such, for example, as the need for standardized tote box and rack sizes to permit easier handling by means of conveyors, electric hoists, lift trucks, etc., are overlooked or ignored.

In one instance, a department in an industrial concern installed an overhead conveyor only to find out after the installation was completed that overall plant efficiency would have been greatly increased if a few hundred feet had been added at beginning and end of the conveyor system. Had this been done, a number of time and cost consuming operations would have been eliminated. Unfortunately, when the discovery was made, it was too late. Due to departmental layout, the changes would have necessitated a complete rearrangement, an additional drive and expensive building changes. This impossible situation could have been avoided if the three department-

*(Continued on Page 59)*





# New Trucking Services

... ANOTHER JACK McCORMACK STORY

**A truck operator seeking a certificate of convenience and necessity from the ICC for a new trucking service must be able to provide corroborated evidence to prove that a public need exists and that other carriers are not already satisfying this need; also that he is financially sound and that his equipment is adequate.**

By HENRY G. ELWELL Traffic Consultant

**"T**HE Federal Motor Carrier Act clearly defines the status of common carriers and contract carriers. At least, that is the opinion of the Interstate Commerce Commission," declared Jack McCormack, free lance traffic manager.

He and John Merten, vice president of the Consolidated Corp., were reviewing some phases of interstate regulation of motor truck operations and rates.

McCormack continued: "As to a common carrier trucker seeking a certificate of convenience and necessity, the burden of proof is upon the applicant to show that other carriers are not rendering a type or character of service which satisfies the public need and convenience, and that the proposed service would tend to correct or substantially improve that condition.<sup>1</sup> That burden is not sustained when an applicant, sole witness on

his own behalf, does not show any active demand for a better service than already provided.<sup>2</sup> In other words, the burden of proof is on applicant to show that the service it desires is required by public convenience and necessity."<sup>3</sup>

"From what you say," observed Merten, "it seems that an applicant who comes before the commission, seeking authority to operate has to show good cause, and have qualified witnesses to actively support his claim for the need of his service."

"By all means," McCormack agreed. "Burden of proof is upon applicant to establish the character and scope of their operations and the truth of every essential allegation in their application.<sup>4</sup> If the commission concludes a hearing is necessary, exhibits attached to the application are not considered as evidence of desirability without corroborating testimony.<sup>5</sup> In absence of such evidence, applicants have not proved any right to a

certificate. Proof to show public convenience and necessity may be offered through documentary evidence and testimony of witnesses familiar with transportation facilities in the territory and the need for additional service."<sup>6</sup>

"In the event the commission refuses to grant a certificate to an applicant might not the courts consider evidence in favor of the truck operator?" Merten asked.

"That would depend on a particular circumstance," McCormack contended. "However, in 31 Fed. Supp. 232 the court said: 'Determination of the weight of evidence presented in an application for a certificate of convenience and necessity is for the commission.' Also in 32 Fed. Supp. 464 the court ruled: 'Hearing of evidence is an exclusive function of the commission and it may disbelieve or disregard any evidence which to it seems unconvincing; it may give as much or as little weight to evidence as it may deem proper.

(Author's Note: Names of persons and company are fictitious.)



But, it must not act arbitrarily or capriciously in considering evidence presented to it."

"You have been referring to 'public convenience and necessity,' but what is the meaning of that term?" Merten inquired.

"The purpose underlying 'public convenience and necessity,'" McCormack explained, "is to prevent interstate carriers weakening themselves by operating superfluous lines, and protect them from being weakened by another carrier's operating interstate a competing line not required in the public interest." The words 'convenience' and 'necessity' are used conjunctively, but must be given a separate and distinct meaning. The word 'necessity' must be somewhat liberally construed, for comparatively few things can be regarded as an absolute 'necessity,' and it was not the intent of Congress to use the words in so strict and narrow a sense."<sup>8</sup>

"I wish you would outline the basic difference of the certificate for a common carrier as compared with the permit for a contract carrier," Merten requested.

For a moment McCormack drummed on the desk with the fingers of his right hand, and then said: "Before the issuance of a certificate it is necessary for the commission to find that public convenience and necessity requires the proposed service; whereas for the issuance of a permit it is necessary to find only that the proposed service is consistent with the public interest."<sup>9</sup> When operation proposed is common carrier, the statute requires consideration of the extent to which the territory is presently served, need for additional common carrier service therein, facilities applicant can provide; less is demanded in the case of a contract carrier.<sup>10</sup> I would add that a contract carrier is one who not only performs transportation under special and individual agreements, but renders a special and individual service required by the peculiar needs of a particular shipper."<sup>11</sup>

"From your explanation it appears to me as if it would be much better to go after a contract carrier permit than to file for a com-

mon carrier certificate," Merten remarked.

"Not necessarily," McCormack retorted. "It isn't too easy to prove that a proposed contract carrier service is really consistent with the public interest. Bear in mind that the commission in every case must weigh ever so many factors. It cannot lightly ignore the position of the common carriers. By the same token it must recognize the place of the contract carriers. To confirm my statement, I'll quote citations relating to the two types of operation. The following is from 10 M. C. C. 475: 'Common carriers, since they undertake to serve the general public, should be protected against contract carriers who take the cream of the traffic and thus make it difficult for common carriers to continue their broader operations.' But, in 19 M. C. C. 620 we find: 'Contract carriers are recognized, and to a certain extent, protected by the I. C. Act, and the fact that advantages of their operations do not accrue to the general public cannot be taken as establishing that such operations are not consistent with the public interest.' To a great extent it all boils down to the admonition 'prove your case.'"

"Is a certificate or a permit required if one transports only his own goods? I mean not for hire?"

"No," said McCormack, "inasmuch as that sort of operation is hauling by a private carrier. Naturally there are many technical angles to a situation such as you suggest, but in general a good an-

swer to your question is found in 41 Fed. Supp. 268 wherein the court declared: 'A private carrier is characterized by the fact that he transports property of which he is the owner, lessee, or bailee for the purpose of sale, lease, rent, or bailment, or in furtherance of any commercial enterprise, as distinguished from common and contract carriers, which are characterized by the fact that they transport property for compensation. . . . In classifying a carrier as private, common, or contract, it is the effect of the plan, of what is actually being done, rather than the designation of it by the person concerned or his good faith in endeavoring to engage in the transportation as a private carrier, that is to govern.'"

"Getting back to considering carriers for hire," Merten said, "I presume the commission carefully checks into the matter of financial ability, and also adequate equipment, of an applicant."

"You are quite right," McCormack acknowledged. "Many applications have been rejected by that body due to lack of fitness on the part of the applicants. I recall that in one instance, it being obvious from applicant's testimony and finance plans that he would be in financial difficulties from the inception of the business, and unless exceptionally fortunate would exhaust his own capital in the development period, the territory being a highly competitive one, a certificate was denied."<sup>12</sup> In another case the commission refused to grant authority because the applicant's equipment was not fully paid for; he was in arrears on fees to one state; his equipment was not fitted with the required safety devices; and he was not financially able to replace equipment, nor to conduct the proposed operation."<sup>13</sup> Then there was the applicant who had no assets except one truck value at \$600. Here, too, the commission had to deny the request for a certificate."<sup>14</sup>

"After a carrier has obtained authority to operate can it secure an extension, or enlargement, of operations?" Merten queried.

(Continued on Page 70)

### NARW Directory

The biennial "Public Refrigerated Warehouses," publication of the National Assn. of Refrigerated Warehouses, listing names and addresses of the various firms in NARW, and also the titles and names of principal officers, and pertinent facts about construction, size, types of refrigeration and other facts about member warehouses, including transportation services, banking references, types of commodities accepted, etc., is now in the process of organization. Advertising will play an important role in the directory. It will be the biggest in the history of the organization.

	MOTOR CARRIERS		RAILROADS		PUBLIC UTILITIES			
	Class I Common Carriers, General Commodities <sup>1</sup>	Class I Carriers of Property <sup>2</sup>	Class I Railroads		Natural Gas Companies <sup>4</sup>		A & B Electric Utility Companies	
	1946	1945	1946	1945 *	1946	1945	1946	1945
Total Assets	\$209,493,146	\$272,791,551	\$25,131,310,315	\$25,957,349,041	\$3,313,908,290	\$3,152,727,701	\$18,083,483,293	\$17,633,241,638
Net Carrier (Utility) Operating Property	103,014,377	123,673,309	16,372,116,737	16,254,318,902	1,974,171,113	1,800,680,731	11,624,204,529	11,425,043,940
Operating Revenue	550,499,352	746,393,799	7,627,650,517	8,902,248,339	654,987,234	626,853,524	3,815,134,750	3,681,543,363
Operating Expenses	421,372,907	586,139,747	6,357,415,175	7,051,627,219	360,463,689	334,058,117	1,935,857,902	1,780,220,465
Operating Depreciation and Amortization	18,441,387	157,862,059			56,590,778	56,835,977	360,382,320	359,479,858
Operating Taxes and Licenses	32,801,744		256,070,988	275,480,339				
Operating Rents	56,489,047		151,971,248	174,962,230				
Rent of Carrier Property		2,352,234						
Misc. Expenses (Exploration and Development)	153,169				7,027,383	7,638,170		
Total Operating Expenses	529,458,276	745,237,040	6,765,467,411	7,502,070,288	425,054,467	390,894,146	2,296,240,222	2,139,699,323
Net Carrier (Utility) Operating Income	21,041,076	1,156,759	862,193,106	1,400,178,051	222,844,529	227,521,206	1,523,718,970	1,546,954,033
Total Other Income	1,594,692	5,192,314	209,836,856	205,194,755	10,064,050	6,244,411	62,046,056	54,337,296
Interest and Amortization (Fixed Charges)		4,693,272	470,846,633	522,861,502	33,523,000	44,800,083	253,492,808	352,600,785
Total Income Deductions	3,199,483		71,971,739	84,046,553				
Net Income before Federal (Income) Taxes	19,446,285	1,655,801	529,211,590	998,444,691	199,444,779	189,745,534	1,332,272,418	1,248,686,704
Federal (Income) Taxes	6,468,590	3,883,092	242,073,137	548,031,046	73,451,163	86,356,194	494,646,162	714,234,713
Net Operating Income after Taxes	14,572,586	2,772,333	620,120,049	852,147,005	149,169,366	145,145,012	829,072,808	832,720,180
Net Income after Taxes	12,967,695	2,227,291	287,138,553	450,423,645	125,769,616	107,409,340	637,626,256	534,463,991
Total Capital Stock and Non-Corporate Capital	58,266,143	90,364,308	8,077,019,173	8,057,076,453	997,558,322	937,421,436	5,939,156,655	4,042,261,490
Long Term Debts (Equipment and Others)	40,497,616	41,889,323	9,093,280,890	9,286,001,440	886,844,125	833,400,804	6,149,653,139	6,141,452,919
Total Surplus	78,147,601	34,161,167	4,638,958,215	4,608,846,403	249,981,175	271,187,117	1,262,442,939	1,804,946,803
Net Worth	86,383,764	124,525,475	12,715,977,388	12,665,923,056	1,267,539,997	1,208,608,553	7,201,599,594	7,967,222,311

<sup>1</sup> ATA Dept. of Research

<sup>2</sup> ICC Bureau of Transport Economics and Statistics, Statement 4714

<sup>3</sup> ICC Bureau of Transport Economics and Statistics 1946

<sup>4</sup> Federal Power Commission, Statistics of Natural Gas Companies 1/45/6

<sup>5</sup> Federal Power Commission, Electric Utilities in the United States 1/45/6

# Ratios, Rates and Reason

*The privileges accruing from the status of public utility, which the motor carriers welcomed during their early days, are poorly adapted to present day conditions . . . Motor carrier rates, according to Dr. Asher, should be determined on the basis of operating ratio.*

EVER SINCE motor carriers made their first timid attempts to free themselves from the shackles imposed upon them by their unfortunate adoption of railroad rates, they have been confronted with an unprecedented barrage of searching questions and analytical statistics. Divested of their quasi-legal and sometimes quasi-scientific ornaments, these arguments boil down to the simple but apparently harassing question: Are motor carriers too prosperous?

Strangely enough, this industry, which for many years was hardly considered by the public or the financial world, and not even by its own entrepreneurs, as walking exactly on the sunny side of the

By FRANK E. ASHER, Ph.D.

street to prosperity, recently seems to assume an air of financial success. This stirs its competitors and particularly its users into a vehement rearrangement of their argumentative ammunition. The philosophy of free enterprise is mildly set aside for later use and the principle of public utilities economics is rigidly and severely applied. By vigorously assuming the title and the privileges of a public utility, the early motor carriers themselves were eager to gain protection from excessive competition from inside and outside of their industry. They now wear this protection like the illustrious

knight of the Middle Ages wore his shining armor. It puts a steel harness around a living body, protecting it mechanically but rendering it clumsy and poorly adapted to the changing conditions of warfare.

Thus motor carriers have been recently exposed to a new array of piercing questions culminating in the alternative: Should the level of their rates be governed by what we call *operating ratio* or by the *rate of return*? The answer to this crucial question supplied by the users of their facilities and services, demands of the carriers: Disregard your *operating ratio*; if you intend to ap

(Continued on Page 40)

# World's newest trucks! NEW 1949 STUDEBAKER



## New in design! New in exclusive features!

**T**HIS handsome, husky, new 1949 Studebaker truck is more than a breath-taking new style.

It's a revolutionary change for the better in truck engineering!

It's a truck that's a stand-out example of the star-studded new Studebaker super line for '49—the easiest trucks to drive and to service that ever wheeled a load.

These sensational 1949 Studebaker trucks are new through and through—even the way they ride is a delightful new experience in relaxed comfort.

They're the world's first trucks with a new kind of "lift-the-hood" accessibility—no standing on a box

to get at the engine or ignition—no fumbling under the dash panel to service the instruments or accessories.

Studebaker dealers all over America are proudly showing this 1949 super line of trucks right now.

More truck models than Studebaker ever offered before! An extensive new range of sizes and wheelbases!

## STUDEBAKER TRUCKS

NOTED FOR LOW COST OPERATION

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**Cabs that are a driver's dream!** Wide doors with "hold-open" stops—lower floors—steps enclosed against weather. Rugged, coil-spring seats—22.80% more window and windshield vision—air-scoop cab ventilator. Two window wings, windshield wipers, arm rests, sun visors; ash tray, cab light, rotary latches are standard. Studebaker's Truck Climatizer heating and defrosting system supplied at added cost.



## RATIOS, RATES AND REASON

(Continued from Page 38)

ply for higher or different rates, you will have to prove that your *rate of return* warrants such an increase!

This very stern demand may be found in the argumentative presentations of shipper groups, in testimony offered by government agencies during rate proceedings before the ICC, in articles in our trade papers sponsored by interested parties. This same challenge now confronts motor carriers in practically every attempt to adapt their rate structure to the changing world of wages, supplies, competition and regulation.

The controversy is not merely theoretical, but on the contrary fraught with very practical implications, and it should be dealt with amid a galaxy of convincing facts and figures. Some of this factual evidence will be presented herein.

Our principal statement will be that the motor transportation industry for hire is so vastly different from other public utility industries, including the railroads, that none of the generally accepted methods of measuring their financial and economic conditions, their earning power and their "fair rate of return" can automatically be applied to it. If we want to get to the root of our problem, we have to free ourselves from the habitual and unqualified use of these financial and economic terms and establish a sound structure of rates for the motor carrier industry, which consists of a loose aggregation of economical units with a very rigid system of government regulation thrown around it.

Let us first analyze the evidence. We have, with some effort, assembled from government and other statistics the basic balance and income figures for four branches of public utilities—railroads, natural gas companies, electric utility companies and motor carriers. The specific sources of our figures are indicated on the bottom of Table I. While some of

the figures are stated differently in some of the basic reports, we succeeded in presenting them here in a uniform manner, with the result that relatively exact observations and analyses become feasible and like terminology applies to identical facts—an achievement frequently missing in the discussion of economical and financial presentations of our subject.

The very essence of our thesis is contained in Table II. Here we attempted to develop the factual answer to the problem as stated above: How different is the motor carrier industry from other public utility industries, and what are the corollaries gained therefrom?

INVESTMENTS AND REVENUES. It comes as no surprise that the relation between operating revenue on one hand, and total assets—capital stock, long-term debts, net worth—on the other, is immensely different for motor carriers than for other industries. The total assets of all the other industries surpass by far the annual gross

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### For-Hire Carriers

The for-hire carriers who have had the dubious distinction of having the most and the toughest troubles of the whole trucking industry, was the theme of a talk by D. L. Sutherland, president, Middle Atlantic Transportation Co. and vice president, American Trucking Assns., before the Second Highway Transportation Congress recently. Besides sharing with the private carrier the urgent problems of taxation, sizes and weights, and public attitude, the for-hire carrier has been virtually the exclusive target of competitive transportation attacks, at least until recently. Differentials in license fees run all the way up to 100 percent. Privilege taxes, gross receipts taxes, and the elimination of reciprocity make his burden all the heavier. The argument behind all this extra trouble seems to be, said Mr. Sutherland, that the for-hire carrier is a favored individual because he makes his living off the highway. He challenged this idea by saying, "after all, the for-hire carrier is simply the operator of a motor truck or trucks who offers a substituted service." He maintained that there should be no difference in burden between the private and the for-hire carrier.

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operating revenue, four to five times in the case of natural gas and electric companies and about three times in the case of the railroads. The total assets of motor carriers show the opposite picture. They amount only to approximately 38 percent of their annual gross operating income. A similar relationship exists with regard to other items of the capital structure of public utilities. Long-term debts and capital stock are both substantially higher than the annual operating revenue. Even railroads maintain this characteristic ratio between capital stock, long-term debts and operating revenue.

The long-term debts and the capital stock (incorporated and non-incorporated) of the motor carrier industry, however, are small fractions, from 4 to 10 percent, of its annual operating income, where the railroads gross approximately as much money annually from their operations as their invested capital and long-term debts amount to.

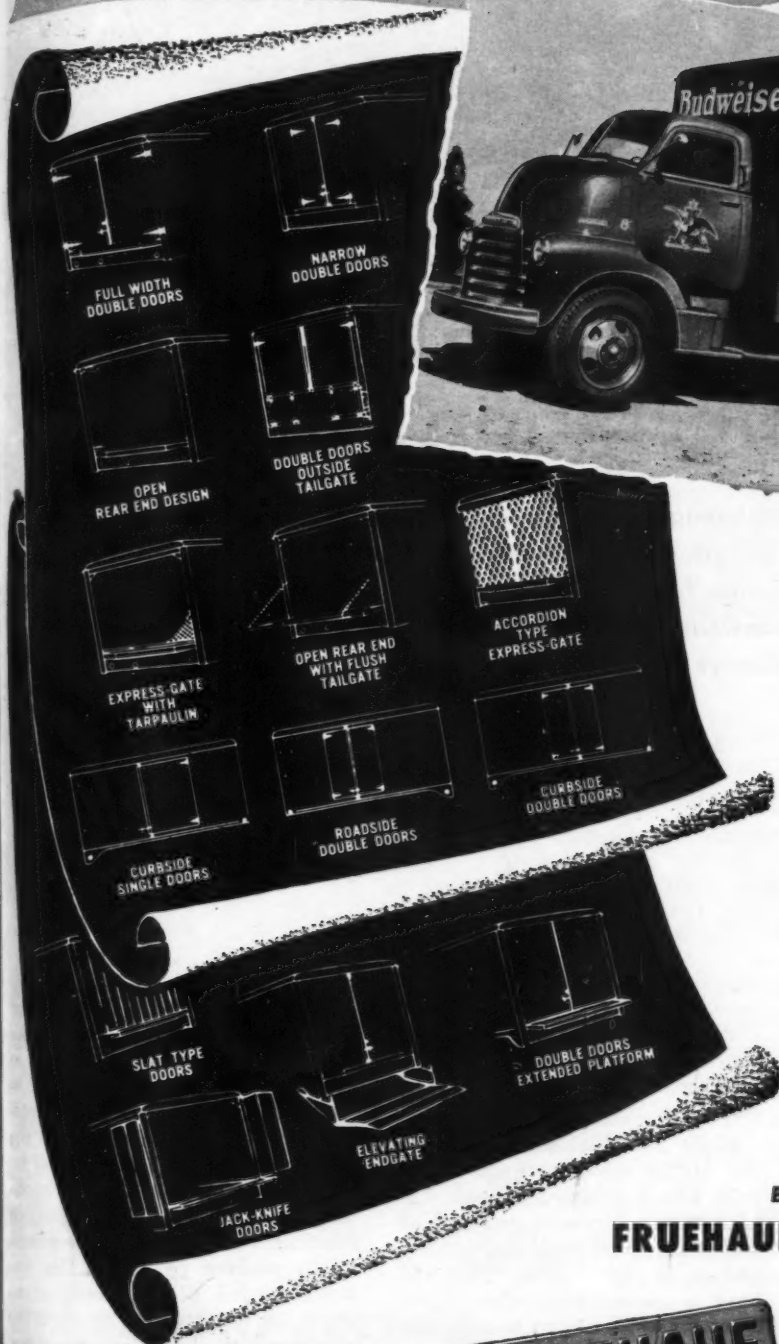
These relatively plain facts may be more simply expressed in the language of a practical economist as follows: The typical public utility industry requires a heavy investment. It demands and it obtains tremendous amounts in borrowed funds in order to produce a relatively modest annual gross operating income. The turnover on its investment is slow. And measured by this huge investment, *every fraction of a percent in net income is the equivalent of very substantial earnings.*

We do not claim absolute originality for these facts. They are presented here principally because of their significant contrast to the identical items of the motor carrier's balance sheet. This industry's economy is governed by a tremendous and almost awe-inspiring disproportion between capital funds and gross revenue and between total assets and operating income and between long-term investments and annual turnover. Motor carriers, figuratively speaking, appear to be living almost constantly above their means. They persistently produce more

(Continued on Page 56)



# Get the Door Design You Need in a FRUEHAUF TRUCK BODY!



**F**RUEHAUF all-steel Truck Bodies offer you hundreds of panel combinations with door designs to fit your job.

Here are a few examples of the different door designs available. Your nearest Branch or Distributor stocks these bodies. All sections are precision-built to close tolerances and insure top-quality bodies at production-line prices.

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DETROIT 32 • LOS ANGELES 11

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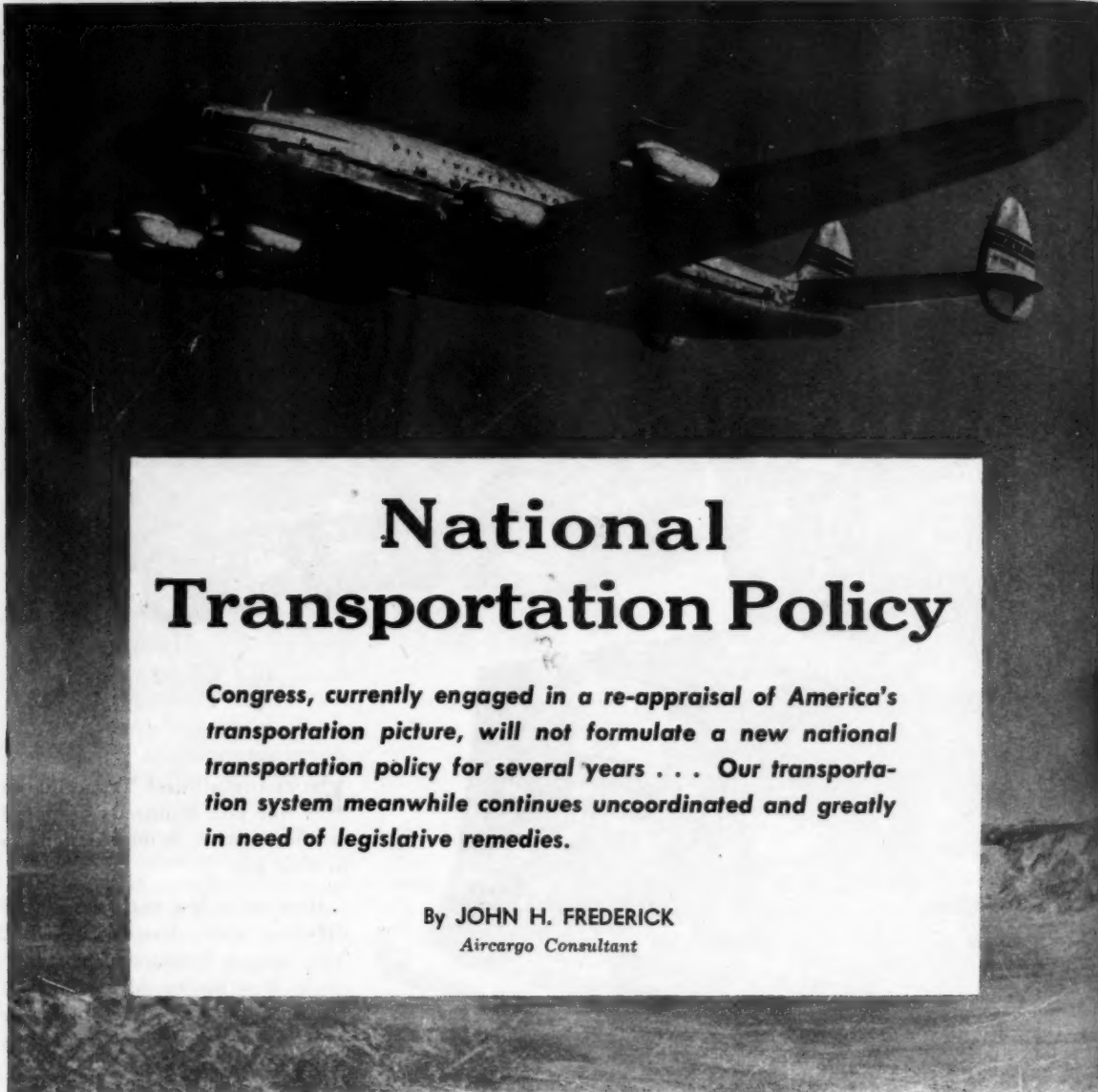
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12 FEET 12 FEET 14 FEET 16 FEET  
Basic Models • Hundreds of Combinations!

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AUGUST, 1948

41



# National Transportation Policy

***Congress, currently engaged in a re-appraisal of America's transportation picture, will not formulate a new national transportation policy for several years . . . Our transportation system meanwhile continues uncoordinated and greatly in need of legislative remedies.***

By JOHN H. FREDERICK  
Aircargo Consultant

I wish I might tell you that the "Transportation Act of 1950—even of 1949," so ably discussed by Professor Sidney L. Miller, was "in the works." This, however, is not the case. Speaking solely from a personal basis, it appears as if it will be several years, perhaps several sessions of Congress, before the various issues of the transportation problem may be resolved among the economic groups of the country and the drafting of the essentials of a new national transportation policy be undertaken—a policy involving

Address before the recent Jacksonville meeting of the Associated Traffic Clubs of America.

any changes which may be necessary to replace the system of regulation which has developed and which is based upon principles applicable to conditions existing 30 years ago.

Right now, and for some time, the House Committee on Interstate and Foreign Commerce has been engaged in a re-appraisal of our national transportation policy and its implementation. This will have a far-reaching effect upon this country and what is done may vation, or for the collapse, of our well set the stage for the preservation of private enterprise.

You are already familiar with

the steps that have been taken starting shortly after the close of hostilities in World War II when the committee realized that failure to provide legislative remedies to meet the needs of our transportation system, or failure to focus the thought of leaders in the transportation field upon their own responsibility, apart from legislation, in meeting their postwar problems might prolong by years the nation's period of reconversion to peace, or might even throw our economy into chaos. It, therefore, assumed its responsibility by proposing an inquiry into the various

*(Continued on Page 53)*

**United Air Freight offers you**

*Speed, Frequency, and Service!*



**SPEED.** Whether it's a shipment of filmy gowns or a 5000-lb. machine part, United can fly it coast to coast overnight! For United offers the one *direct*, high-speed route . . . the *only* route linking the major cities of the industrial East with those of the Midwest and *all* the Pacific Coast.

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**FREQUENCY.** Every United flight carries freight and express. In addition, fast 4-engine Cargoliners speed nine-ton loads on regular daily schedules.

**SERVICE.** United has a fully staffed ground service. Prompt pick-up and delivery. No "extras"; one simple bill covers everything. And only one air waybill is required from any point on United's system to any foreign city served.

Make United your Traffic Headquarters! Phone your local United office. Or write United Air Lines, Cargo Sales Division, 5959 S. Cicero Avenue, Chicago 38, Ill., for a copy of United's localized rate schedule. Rates are surprisingly low.



## **AIR FREIGHT SERVICE**

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# FREIGHT RATES and PALLETS

*The use of pallets in materials handling and transportation, while increasing, still is restricted by the rates and ratings for pallet transportation published by carriers and approved by the Interstate Commerce Commission . . . Pallet manufacturers are seeking modification and uniformity throughout the country.*

By **EDWIN CHESTER HASTINGS**  
*Special Correspondent*

ONE of the interesting phenomena in the realm of materials handling, after all a comparatively new twist to an ancient art, is the pallet. A raised platform on which the material to be transported rests, the pallet can be lifted and carried by a fork or lift truck to its destination and stacked several high, conserving space and saving time. Its use is of immense benefit to both shipper and carrier; it is not a fad, but a factor in the ever-increasing mechanization of materials handling.

The use of pallets is now on the increase. Some are built on a small scale by companies for their own use in warehouses, interplant distribution and outside transportation. Lack of experience in the construction and the selection of the proper lumber for building the pallets makes this a costly method for some of these companies. In some cases they have paid more for the lumber alone than they would have for completed pallets from one of the many firms who are in business to build them. One corporation paid an excessive price

for the lumber to build their pallets. The lumber was "just lumber" and the pallets did not give service over three months. Replacement and repairs are expensive when the main fault is due to improper construction, wrong specifications and poor quality lumber.

In most cases it is more practical to buy pallets from a reliable pallet manufacturer than it is to build them. Mr. H. J. Miller, president, National Pallet Corp., Pittsburgh, is both a lumber and pallet engineer. His company is a large maker of pallets, any size, any type. National has fourteen plants in Pennsylvania, Maryland, North Carolina, South Carolina, West Virginia, Kentucky, Alabama, Louisiana, Arkansas and Georgia.

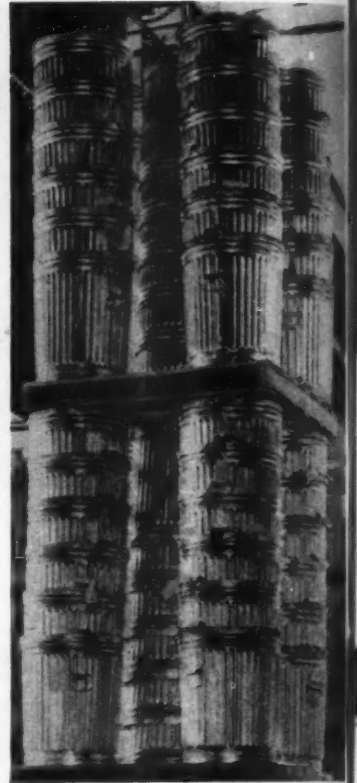
The company builds a wooden pallet, and it is noted for being careful what type of lumber is used in the construction. It invites tests of its products. Mr. Miller believes pallets should be selected on the basis of the answers to these questions: What is expected of a pallet? What pallet will cut costs of materials handling? How much service will the

pallet give? What quality of lumber is used? What strength? What amount of money will be required for upkeep?

The company builds a pallet for rugged use, a pallet of 7/8 in. hardwood. Plants are located at the source of supply, the hardwood forests. To these plants orders are sent from all parts of the country, and pallets are made and shipped direct. Transportation cost has a strong influence in plant location, and areas with low inbound and outbound freight rates are given preference.

National, as one of the leaders in the field of pallet manufacture, is proud of its research development. It has spent quite a good deal of money to develop better products and to find better ways of making them. Its pallet nails are of chisel point hardened steel and are nearly impossible to tear loose. It urges industries to test its pallets on the job before final ordering. In this way, National feels it can give best service and find the right tool for the job. It feels that industry must be given

(Continued on Page 46)



# ANNOUNCING

## THE NEW YALE LOAD KING SCALES

**new type  
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insures a longer life  
of sustained  
accuracy**



**Yale Load King Dormant Platform Scale** available with or without tare beams or unit weight cabinet. Gross weighing capacity 12,500 lbs.

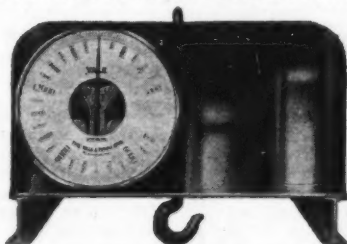
**Yale Load King Portable Platform Scale.** Can be furnished with 4 wheels or 3 wheels and a handle. Dial mechanism and platform lever system are unaffected by travel over rough floors. Gross weighing capacity to 2,250 lbs.



**Yale Load King Counting Scales.** Single or double fixed ratio models. Can be used for weighing and counting all kinds of parts quickly, accurately. Gross weighing capacity to 12,500 lbs.



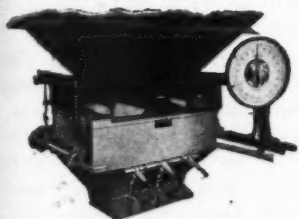
**Yale Load King Bench Scales.** Available either with or without tare and capacity beams. Several platform sizes. Gross weighing capacities up to 2,250 lbs.



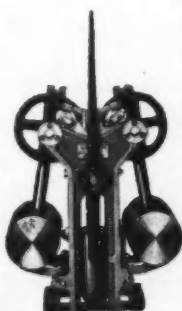
**Yale Load King Crane Scale.** Permits weighing while loads are in suspension; attach to hoist or crane. Standard and low headroom models. Gross capacities to 60,000 lbs.



**Yale Load King Overhead Track Scales.** Standard or low headroom lever systems. Available for use with existing or planned overhead track facilities. Gross weighing capacity up to 4,500 lbs.

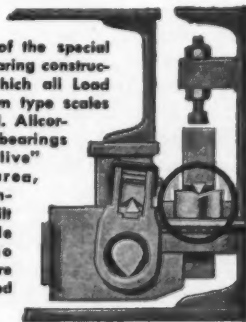


**Yale Load King Batching Scales.** Feature high gross weighing capacity and assure consistently accurate batching of hot asphalt, concrete and other loose materials, liquids. Gross capacities to suit requirements.



The new Yale Scale mechanism with exclusive Magnetrol feature that controls weighing accuracy. Other features include fixed center construction that prevents misalignment of parts, positive mechanism locking device that protects parts against damage, and draft bands of a new alloy metal that will not rust, corrode, kink or break.

A close-up of the special outboard bearing construction with which all Load King Platform type scales are equipped. All corner support bearings are outside "live" platform area, making it impossible to tilt a Yale Scale platform no matter where load is placed on it.



SEND TODAY FOR BROCHURES, MENTIONING  
TYPE OF SCALE IN WHICH YOU ARE INTERESTED.

**THE YALE & TOWNE MANUFACTURING CO.**  
4647 TACONY STREET, PHILADELPHIA 24, PA.

## FREIGHT RATES AND PALLETS

(Continued from Page 44)

the whole story on pallets, and to this end participated in a recent series of lectures given by the University of Pittsburgh, dealing with the correct lumber to use in building pallets. Mr. Lee Miller, secretary-treasurer of the firm, conducted the lectures.

But with all these educational programs and research projects, with the evident desire of shippers and carriers to employ pallets in their work, there is yet a great stumbling block to the continued and further expansion of the use of pallets. This is the ratings and rates published by carriers on pallet transportation, and especially for carrying used pallets back to the point of shipment for further use. The rates on pallets are not uniform in all territories, and both ratings and rates don't allow for conditions that are met in many sections where a uniform system could be of benefit.

Classification committees in all freight bureaus have approved the present ratings (classifications) of the item. The Interstate Commerce Commission has approved and ordered the carriers to publish them. The carriers have also set up the present rates (costs of hauling), and the ICC has approved and ordered them published. So, for all practical purposes, they are legal.

However, legal or not, it is the contention of many pallet manufacturers and users that the ICC in accepting them has not been guided by the "public interest," as they are charged. The fact that the same ratings and rates apply on new and used pallets is quoted as a basis for this argument. This artificial discouragement of the use of pallets, claim rate opponents, is hardly in the public interest.

Repeated complaints in hearings before the ICC for a change in these rates and ratings have been rejected because presented on the basis of use. The commission refuses to consider the use to which an article is put as a basis for rates and ratings.

Complainants agree that carriers

must not be expected to haul any commodity without profit. If the rate is too low to allow the carrier a justifiable profit, an unfair advantage will obtain to the shipper/consignee. Then the ICC will be guilty of undue preference to the shipper/consignee and undue prejudice to the carrier, which is specifically forbidden in the Interstate Commerce Act, Part I, Section 3 (1). Therefore an unreasonably low rate on pallets is not sought by complainants. On the other hand, an unreasonably high rate would discourage the shipment of pallets and thus work to the disadvantage of both parties. This is the basis of the arguments advanced for a modification of present rates and ratings.

Present aims call for more uni-

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### Power Truck Safety Code

Manufacturers and users of industrial power trucks have organized a sectional safety code committee to function under the procedure of the American Standards Assn. The Committee, which was organized at a recent meeting in the rooms of the American Society of Mechanical Engineers, will prepare a safety code to cover the manufacture and use of industrial power trucks.

Charles W. Meldram, New York District Manager of the Industrial Truck Div. of the Clark Equipment Co., was elected chairman and C. F. Kells, representing the Electric Industrial Truck Assn., was elected secretary.

Three subcommittees were established and chairmen appointed as follows:

Subcommittee on nomenclature—Norman L. Cahners, Material Handling Laboratories.

Subcommittee on operating and traffic rules—John W. Young, International Harvester Co.

Subcommittee on industrial power trucks—Charles S. Schroeder, Yale & Towne Mfg. Co., representing the Electric Industrial Truck Assn.

These committees were assigned to develop the material under the following scope:

"Safety requirements relating to the manufacture and use of industrial power trucks, such as platform trucks, tractors, low lift trucks, high lift trucks, fork lift trucks, and special industrial trucks, but not including commercial motor vehicles intended for use upon land highways; these safety requirements to include such factors as operating controls, brakes, steering, stability while lifting and carrying loads, maneuverability, etc."

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form rates in all territories and these lower than at present. The use of pallets should then increase. A difference in rates between new and used pallets is only sensible, say rate change proponents. One step forward is the listing of the pallet in the Consolidated Freight Classification No. 17 (OC 61, SC 60, IC 25, WC 72). It is not listed as an item under "lumber," but is indexed as a separate article in Item 35425, "Pallets, Lift Truck" in the index, and under the article section, "Pallets; Platform or Skids, for Lift Trucks."

Pallet manufacturers urge shippers to follow the descriptions given here to avoid paying a possible higher rate. When bills of lading are made out by the shipper, he may list the trade name of his particular brand, and a wrong description may result in a first class rating, carrying higher charges. A recent ICC decision says, "A manufacturer's description of a commodity also fixes its identity for transportation purposes."

Complainants also decry the fact that in most cases class rates apply on the movement of pallets and urge the lower commodity rates. This would encourage large volume shipments, they say. In present ratings, the carload minimum is 30,000 lb. and the ratings are 5-6-5—fifth class in official and western territories, sixth in southern. L.e.l. ratings on pallets SU or KD are class 1 and flat pallets without parts are class 3, in all territories.

Exceptions provide a few isolated instances of lower rates, but not enough to encourage a more universal use of pallets. Agent B. F. Jones' Exceptions to the Official Classification ICC 3926 Sup. 16, p. 67, Item 8740B lists L.e.l. pallets as class 60. A class rating of 31½ is found in Agent R. E. Boyle Jr.'s Southern Exceptions No. 24. ICC 103, Item 35425, L.e.l. minimum 24,000 and subject to Rule 3 (the 24,000 lb. minimum is dependent on the length of the car). This rating, while it will give a low rate, has many restrictions in that it applies only to and from some points and states of the southern territory. There are lower

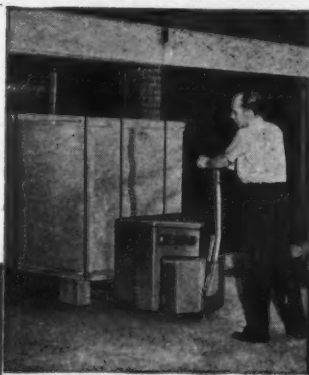
(Continued on Page 71)



LEWIS-SHEPARD FORK TRUCK



LEWIS-SHEPARD POWER JACKLIFT



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Every day more Battery Electric Trucks give the answer to material handling problems . . . saving time and cutting costs as much as 50%. Battery Electric Trucks lift, haul and stack loads of every kind. They move swiftly from plant to warehouse . . . loading platforms to storage rooms . . . transferring goods quickly and easily.

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Because of their unique construction they have all four of these vital battery characteristics: *high power ability, high electrical efficiency, ruggedness and long life.*

To speed up your material handling and to cut costs, team Battery Electric Trucks with Exide-Ironclad Batteries in your plant operations.

Write for further particulars and FREE copy of Exide-Ironclad Topics which covers latest developments in materials handling and shows actual case histories.

DEPENDABLE  
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**1888... Dependable Batteries for 60 Years... 1948**

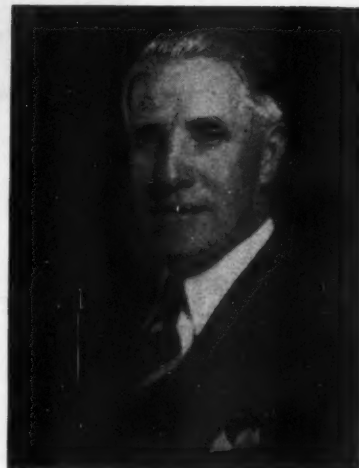
THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 22 • Exide Batteries of Canada, Limited, Toronto

# THE CURRENT JOB OF MARKET RESEARCH

**Now that the buyer's market is again prevailing in all but a very few lines, the tremendous task of ascertaining the buying power and the buying preferences of the increased and shifted population areas of the nation is important.**

By **WALTER E. ELIESON**

*Deputy Director  
U. S. Department of Commerce  
Los Angeles Regional Office*



**J**UST BEFORE the days of easy selling began in 1942, market research and market analysis had been making steady gains as important functions of manufacturing and distribution. Business was accepting these functions as necessary and profitable. During the war, however, distribution became secondary and a seller's market made the work of market research all but useless.

Nineteen forty-eight finds our production machine well prepared to furnish the needs of the consumers. The wholesale and retail inventories are reaching a saturation point that now makes production a hazardous risk unless the potentials of consumer demand have been pre-determined.

The normal competitive environment of free enterprise functions again during the current year, and in this environment, with the exception of a very few products, all types of consumer merchandise is in plentiful supply.

Every manufacturer must now agree that the first task of our economy is in the field of distribution. Every trade magazine and every business leader is calling upon business to sharpen the tools

of distribution to the point of perfection to enable the American consumer, with the help of world markets, to consume our entire production.

The retailer, the advertising man and the sales manager know that if they do not sell the goods being produced, production will back up and jam the wheels of the entire productive system, leading to cutbacks, cancellations, and eventually to unemployment.

Capitalism begins *when a sale is made*. Our question is: What can research do to help *sell*?

*Analysis of the vastly changed areas.* During the past seven years phenomenal changes have taken place in many areas throughout the nation. These changes must be evaluated by competent market research individuals. One of the best tools available to assist the research worker in this evaluation is "State and Regional Market Indicators—1939-1945." This 70 page book has been prepared by the Marketing Division of the Department of Commerce in an attempt to assemble data that can be used as a tool for research workers. The Aug. 1947 issue of *Survey of Current Business* provided addi-

tional data on income and the shifts of income and production during the war from established areas to new frontiers.

## ABOUT THE AUTHOR

Mr. Elieson, Deputy Director, U. S. Dept. of Commerce, Los Angeles Regional Office, is a strong believer in the principle that "no business decision is better than the facts on which it is based."

Getting essential facts into the hands of business men is a more-than-full-time job with him. He not only dispenses economic information daily through his staff of business specialists at Dept. of Commerce regional headquarters, but he takes it to the public directly by appearing at meetings and business conferences. During his five years in the Southwest, he has been addressing more than 150 such groups each year.

He tops off his strenuous round of activities by conducting evening courses at the University of Southern California.

Mr. Elieson is from Montana, where he was State Director of Distributive Education. Previously, he had been on the staff of the University of Utah, lecturing on salesmanship, business personality, and accounting. His knowledge of practical business management comes, however, from actual experience in the furniture, grocery, and chain store businesses, as well as with banks in Idaho and Utah.

Mr. Elieson is president of the Southern California Chapter of the American Marketing Assn.

*Evaluation of such pertinent changes as:*

(a) Formation of 12 million new home units through marriage.

(b) Increase of 20 million new customers through birth.

(c) Great shift of residence from area to area, a shift of about one-fifth of our population.

(d) The drastic changes in income payments, and the positive shift of income groups from lower to higher income levels.

*The force of new ideas.* Thousands of new ideas, inventions, and improvements are appearing in a steady stream. Market research must evaluate the force of this new competition, and prepare the manufacturer and distributor before the full force of the new idea is felt.

Dr. Ross Cunningham, immediate past president of the American Marketing Assn., has prepared the following list of pertinent questions for the consideration of marketing executives:

*Quiz for Marketing Executives:*

1. Do your products, as presently designed, *really* meet market needs? How do you *know* this is so? Are market needs changing and, if so, how?

2. How do your products compare with those of your competitor? In design, in performance, in price and, most important, in the eyes of users?

3. Could your products be improved to give greater satisfaction? A better product is one of the most solid kinds of competitive advantage.

4. Have you too many, or perhaps too few, products in your line? This question needs to be answered from the point of view of users, of distributors, and of your own marketing operation. What yardsticks do you use in dropping products from your line?

5. Are you reaching all of the *known* profitable markets for your products? Are there perhaps unknown markets which could be tapped profitably? If your answer is "now," can you prove it?

6. What types of new products should you develop or add to your line? Is your new product development program designed to capitalize on company strengths

and avoid company weaknesses? Have you adequate measures of market acceptability for your new products before investing heavily in production and marketing operations? Is the entire sequence of new product development from the idea to final marketing so managed as to achieve utmost speed?

7. What is your industry's total sales, and what is your company's share, by products, by markets, by distribution channels, etc.? What trends are evident in your company's performance as compared to your industry?

8. Do you have an adequate measure of sales potentials by salesmen's territories, by districts, etc., so that you can plan your marketing activities most intelligently, can establish useful sales quotas, and, in general, can appraise the effectiveness of your territorial sales efforts?

9. What is the relative profitability of your various products and sales territories?

10. Are your distribution channels adequate to reach the market properly? Should new channels be added or perhaps some eliminated? Do you have too many distributors in a particular market?

11. Are the price levels of your products the most profitable today, and in the light of probable future conditions? Is consumer psychology regarding your prices adequately known? What are risks of further increases? What price behavior may be anticipated from competitors? Do you have adequate production cost data at different levels of output, and estimates of distribution costs, so that fully intelligent consideration can be given to price policy?

12. Are discount structures to

various groups of distributors competitive and designed to encourage favorable attention to your product? Are wholesale levels perhaps too low or too high? Are quantity discounts, if used, related to costs of selling larger quantities?

13. Is the marketing program of your company worked out in terms of overall strategy with salesmen, advertising of various types, distributor assistance, and other selling methods combined in the most effective proportions? Is the coordination between the field sales force and advertising efforts truly effective so that each reinforces the other?

14. What distinguishes your successful salesman from your poor salesman? Is use being made of such information in adding new men? Can psychological testing be used to advantage in your selection procedure? Perhaps you have men who are too good for the class of work rather than too poor. More trouble comes from this than the other way around.

15. Are sales territories properly laid out to keep salesmen effectively busy? Does your measure of sales potential aid you in laying out such territories and in measuring performance?

16. Are quotas set with reasonable accuracy, and is information available on competition and other factors which affect performance?

17. Does the salesman's compensation plan encourage him to put forth his best effort along lines desired by the company?

18. Is field supervision truly adequate in amount and quality?

19. Are salesmen reporting essential information from the field, and is this information actually used?

20. Do you have means for setting reasonable standards for salesman's expense in various territories?

21. Is your training program adequate for meeting present and future buyer's markets?

22. Are your advertising media reaching customers, prospects, and distributors at the lowest possible cost consistent with effective coverage?

(Continued on Page 82)

### **NFWA to Meet in Florida**

The National Furniture Warehousemen's Assn. has announced that its 1949 annual convention is to be held Jan. 23-28 at the Palm Beach Biltmore Hotel, Palm Beach, Fla., instead of at the Biltmore Hotel in Santa Barbara, Calif., as originally planned. This change in meeting place is said to have been necessitated by a recent change in ownership of the California hotel and by the impossibility of securing adequate substitute accommodations on the West Coast.





# AIRCARGO and the Feeders

*Short haul, or feeder, airlines furnish a much needed link to hundreds of the nation's small cities and producing areas not directly served by the major airlines . . . Primary objectives of the feeders are: extension of routes and schedules, adaptation of equipment, cooperation with long-haul airlines, further agreement with ground carriers.*

By MICHAEL E. COLE  
General Traffic Manager  
Southwest Airways

**R**APIDLY rising interest throughout the air transportation industry in the comparatively new field of air-cargo has been reflected in the recent wave of published articles on this subject. One of the fastest expanding industries in the United States, it presents numerous problems to air carriers, and not a few uncommon problems are

faced by the country's short-haul, or "feeder" airlines.

Despite the "greater" problems, the short-hauls are determined not to be left out of this potentially profitable industry. Actually, for us—if properly developed—it promises to be a natural source of revenue. The fact that we directly furnish a tie to the nation's vast producing areas precludes the possibility that we will lose a stake in the air-cargo enterprise. It is only reasonable to assume that our part will be an all-important one.

To fully understand the complexities of our problems, one must first be acquainted with short-haul operation itself. A radical departure from the rudiments of air transportation as established during the postwar years, it was born of necessity—and it of necessity confronted, and surmounted, mountainous problem barriers. In the beginning, the consensus among air transport experts was that it could not be done. Today, the feeders have reached a point from which they can look back on a wealth of experience, and forward to a permanent place in the nation's commercial air enterprise.

Briefly, the short-hauls set about to accomplish what never before was seriously considered worth a try. They, as a group, were to bring air service to that two-thirds

of the country's population heretofore bypassed by commercial aviation. The smaller communities dotting the routes of the long-haul or "trunk" airlines certainly needed air schedules, mainly because of their isolation factor. But could it be done profitably and was it even practical? Could an airliner making approximately eight intermediate stops over a 400 mile route maintain the speed advantage of air travel? Could these audacious feeder airlines compete with ground carriers? They could and they have.

Southwest Airways, one of the original feeders certificated in 1946, now serving 25 Pacific Coast communities and, incidentally, carrying more than 80,000 passengers in its initial year of operation, has emerged as one of the foremost of the feeder group. If the opinions of Southwest's founders, James G. Ray, Leland Hayward and John Connelly, mirror those of other feeder operators, the short-haul is here to stay. Likewise, as they have done in the past, they will ferret out the answers to this new problem—that of developing air freight.

Since inauguration of air-cargo service last August, Southwest has transported 12,225,953 lb. of perishables and other products in its cargo compartments. This figure is impressive when one considers

## About the Author



Michael E. Cole joined Southwest Airways as general traffic manager in July, 1946. He began his aviation career with Atlantic Seaboard Airways in 1932 at the old Washington-Hoover Airport. There he engaged in supervising scheduled traffic and charter business until 1935 when he joined Pennsylvania Airlines (now PCA-Capital Airlines). During his association with PCA-Capital Airlines he was traffic manager at Lansing and reservations manager at Washington; and during the five years preceding his association with Southwest Airways he managed the entire PCA reservation and ticket office system.

the fact that this has been accomplished totally without expense in conversion of aircraft, consumer education and modification of scheduling. Of the total 31,901 lb. was carried this January as compared to the August total of 15,443. The poundage represents widely diversified products: baby chicks, strawberries, animals, machine parts, and even shipments of whole blood. For Southwest, air cargo is beyond the proving stage.

There are four paramount objectives which will contribute to successful feeder air cargo development. They are (1) extension of routes and adaptation of schedules, (2) adaptation of, and/or radical change in, equipment, (3) close cooperation with long-hauls, and (4) further agreement with ground carriers.

First of all, the air cargo business cannot be considered good business by the short-hauls as they exist today. We must be able to look to extended routes,<sup>1</sup> since air cargo revenue can be expected only on a per distance basis and the high cost of handling in volume precludes profit on a solely short haul. Aside from cost there is the matter of time. Since short-haul passenger operation is necessarily "hurry up" operation, time spent in handling of large, but less than planeload, shipments consigned to points of proximity will defeat our purpose.

With increasing demand for freight service, changes in scheduling will evolve. For example, over our three-segment Route 76 we could use an additional early hour schedule. Leaving trade centers at a time when obviously more freight traffic than passenger is expected, we could carry volume freight to approximate points along the routes, changing to passenger schedule as and where that traffic picks up. It may prove feasible to have a late evening flight carrying passengers to that intermediate city and changing to freight there.

However, the normal growth of the industry will alleviate many of

these local service problems. The shipment of perishables in less than planeload lots can be and now is reasonably profitable. Perishables naturally constitute one of our greatest potentials and even today the demand throughout California for equipment far exceeds our means of providing it.

Perhaps the equipment answer lies in a new type aircraft, combination passenger-cargo equipment providing more space for the latter. One such type plane not yet proven but possibly answering the description is the movable bulkhead passenger-cargo ship. A means of rapidly converting from one to the other would permit extensive handling at intermediate points along the routes on certain schedules. Also, there is in the offing a plane that carries a completely detachable cargo compartment.

The real future value of feeders will be in contribution to more than regional long-hauls, however. The problem herein is loss of time and the great expense in transfer. The answer, in part, is undoubtedly in the system of interchange of equipment and personnel, such as effected by Delta Airlines and Transcontinental Western Airlines. By such an interchange of plane and crew at major terminals the great handicap of time and

cost in handling of cargo is virtually eliminated.

Also, assuming that we can look to the right kind of equipment and plenty of it, there still remains the fact that we cannot in some cases compete with ground transfer companies in short-haul operation. Infrequency of schedules throw what would be air cargo to the slower but more frequent ground carriers. Perishables fall to air transport, but only if ground shipment from terminal to destination can be expedited. Counter-balancing is the isolation factor in many of our communities. As in passenger travel, this alone is enough to create demand for air service. So greater cooperation between ground and air transport concerns is needed. Recently publicized agreements with ground pick-up and delivery companies at our major terminals of Los Angeles, San Francisco and Oakland are a step in this direction.

Southwest's immediate program includes the promotion of air freight business in shipment from trade center to the smaller intermediate community. Intermediate city-to-metropolis business now exists. Southwest is also currently selling the idea of unperishable less than planeload freight business.

Actually, the business of transporting freight by air is not a postwar development. The 20th anniversary of small-package air cargo was celebrated last September. The reasons behind the fact that the feeder carriers are only now on the threshold of this enterprise are: (1) the feeders themselves are in their infancy, (2) the nation's certificated airlines are only now beginning to see the great potentialities of air freight, and (3) growth of the business was impeded by the backwash of the war.

Now well on its way, the national cargo picture should within a short time assume tremendous proportions. Indicative of this is the fact that here in California promotion of mass movement of the state's agricultural and perishable products by plane is one of the first major projects to be

(Continued on Page 55)

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### New Pulp Mill

Plans for the construction of a new paper and pulp mill at Green Bay, Wis., are announced by the Green Bay Paper & Pulp Co. The new million dollar plant, to be headed by George Kress, president of a sister company, the Green Bay Box Co., is to employ a new method in pulp preparation.

This new semi-chemical technique of preparing pulp is one in which the raw stock, usually raw wood chips, is partially digested by chemical means, then mechanically refined, thus completing the separation of the fibers. This type of processing is limited, but through the work of the Forest Products Laboratory, three factors have been developed which make this process important from a conservation viewpoint. 1. It produces a much higher yield of fiber per cord of wood, 75 to 80 percent. 2. It is well adapted for using such hardwoods as aspen and birch, as well as elm, maple and oak, previously unsuitable for pulp. 3. It can also make use of wood wastes.

The Green Bay Paper and Pulp Co. will make two principal products, corrugated board and liner board for shipping containers.

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<sup>1</sup> Southwest recently concluded hearings before the CAB in application for extension of routes to cover more than 2,000 additional cities in California, and such points as Boise, Yuma and Reno.

# 600 out of 12,000

11,400 bills, or 95 percent of all legislation introduced in the 80th Congress, failed of enactment . . . The remaining 600 bills enacted into law included important legislation bearing on transportation and distribution.

By ARNOLD KRUCKMAN, Washington Correspondent

OVER 12,000 bills were introduced in the 80th Congress, presumably to be enacted into law. Of course, most of these bills were gestures to satisfy some constituent or group of constituents. They came to brief life to blush almost unseen. The proof of the pudding is given in the fact that just a few more than 600 finally were enacted by the Congress and approved by the President. In other words, approximately 95 percent of the legislative grist means little or nothing. Even when a bill is passed by one house or the other it is not very significant; often there is a sort of tacit understanding that a bill enacted by one will be permitted to wilt by the other. In this Congress the House passed 2,000 bills and the Senate put through 1,700. And, of course, the President vetoed a number.

Recapitulation of the achievements of the 80th Congress list as outstanding the enactment of the Taft-Hartley Act, which was put on the statute books by a dramatic over-riding of the Presidential veto, the portal-to-portal law, regarded as aggressive and realistic law-making; income tax reduction; the enactment of the law which established the ECA; the reciprocal trade agreements renewal; the authorization of the 70-group air force; authorization of a business

census every five years; exemption of carriers from anti-trust prosecution when making rate agreements; maintaining the *status quo* in the Social Security program; and the enactment of the new Selective Service Act.

There are current rumors that a Very Big Noise may come almost at any time out of the Ferguson Committee, the senatorial group which exposed the nation-shaking scandal that sent Gen. Meyers to the penitentiary. They whisper that this investigation into contracts—presumably war contracts—may make the Meyers episode tepid and mild by comparison. It is not expected to touch the air forces. But if there is any validity in rumors, it may touch both the Democrats and the Republicans.

The draft act obviously is the legislative product which has the most immediate interest to all parts of the national economy. It begins to function in September, taking men between 19 and 25, both ages inclusive. The first contingent is expected to number 75,000. Those drafted are legally entitled to their jobs after they are released from the services, if the job they have left is classified as permanent. They must make application for reinstatement within 90 days after they are released from the service. The soldier or



Harris and Ewing

sailor is entitled to the same job, with the same pay, status and seniority, if he is qualified still to perform his duties; if he cannot do the same work, he must be "restored to such other position (the duties of which he is qualified to perform) as will provide him like seniority, status, pay, or the nearest approximation thereof consistent with the circumstances in his case." The law, however, provides that reemployment is not mandatory "if the employer's circumstances have so changed as to make it impossible or unreasonable." It also is provided that the draftee shall be considered to be on leave of absence from his job, and shall be considered to be entitled to insurance or other benefits offered the employer; and the reemployed draftee may not be discharged from his job for one year after his restoration to civil life. If two or more are entitled to a particular job, the one who left first has priority, but without prejudice to the other person or persons involved.

The aspect of the draft law which has caused the most turmoil is that section which provides priority to those industries which have defense orders. These industries will have the right of way to produce whatever they make for the armed services. The law provides special priorities to those

(Continued on Page 60)



## POLICY

(Continued from Page 42)

aspects of the situation—which was authorized by House Resolution 318 of the 79th Congress, and continued by House Resolution 153 of the 80th Congress.

In approaching the many problems, it was realized that they involve a general transportation system, a system composed of important competing agencies including railroads, motor, water, air, and pipeline. The problems are, moreover, complicated by the fact that each of these types of transportation is capable of performing a service that in some respects has advantages over all its competitors. The transportation problem of this nation is essentially one of competition, and some way must be found to use the different types of transportation with a view to best serving the interest of the shipping and traveling public and at the same time with fairness to the competing agencies. In this connection, it must be borne in mind that to a very large extent all forms of transportation have been developed without proper coordination with one another. Each has its own economic problems, each is highly competitive with the others, yea each is a useful part of our transportation system.

The public is paying a tremendous bill for all these services, both through direct charges and taxation. The services of all agencies intimately touch the daily life of every citizen. Those engaged in agriculture and industry are dependent on efficient transportation to move their products to consumers at the lowest possible cost. This nation cannot prosper, and can scarcely exist, without an adequate and efficient system of transportation.

In the light of profound changes in the economy of this industry and its relation to the country, it is perfectly apparent that we must adjust legislation and administrative control to an entirely new set of conditions.

Obviously, the primary function

(Continued on Page 64)

## Speed pays...whether it's



**Movies** Newsreels and preview films get the "Air Express treatment" because the motion picture industry knows speed pays.

**Aviation** To get replacement parts the fastest way, the aviation business uses Air Express regularly. Speed pays.



**Wholesaling** Many wholesalers standardize on Air Express shipment for supplies. This way they offer wider variety, better service and still keep inventories low. Speed pays.

## Speed pays in your business, too!

And when you're talking speed, remember Air Express is the fastest possible way to ship or receive. Shipments go on all flights of Scheduled Airlines. That means round-the-clock service—no waiting around. Door-to-door service at no extra cost. Rates are low. 27 lbs. goes 900 miles for \$7.46; 8 lbs. for only \$2.57. Phone local Air Express Division, Railway Express Agency, for fast shipping action.

- Low rates—special pick-up and delivery in principal U.S. towns and cities at no extra cost.
- Moves on all flights of all Scheduled Airlines.
- Air-rail between 22,000 off-airline offices.



Rates include pick-up and delivery door to door in all principal towns and cities

AIR EXPRESS, A SERVICE OF RAILWAY EXPRESS AGENCY AND THE  
**SCHEDULED AIRLINES OF THE U.S.**

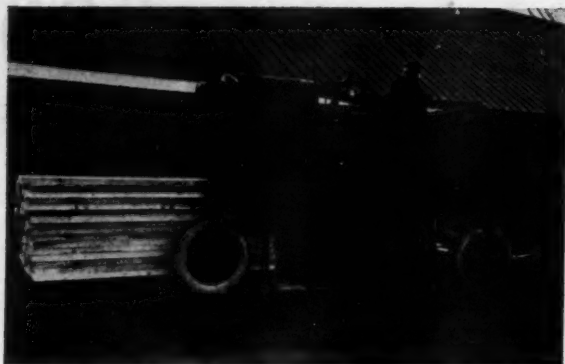


Fig. 1.



Fig. 2.

**S**INCE pallets are a much used commodity in modern materials handling, it is only natural that mechanized handling methods of the latest design should be used in the production of these single or double faced platforms. At least, that is the way Acme Pallet Co., a leading manufacturer of all types of pallets, does it.

From the time the selected oak, maple, beech, birch, ash and other kinds of hardwood of suitable characteristics enter the plant to be sawed until they are shipped out as finished

pallets, materials handling methods are used to transport them about the plant and store them for seasoning. Figure 1 shows a large lumber carrier or straddle truck about to lift a load of boards which have been rough cut and square-edged for transport to the yard for air-drying and seasoning. Figure 2 shows a fork truck taking loads of the seasoned lumber from the yard to the plant for resurfacing and planing, and for cutting. The lumber is multiple cut into desired lengths, three or four boards at a time, thereby increasing the output and lower-

ing the cost.

Holes are pre-bored to prevent splitting. Then the assembly department gets the parts, again via mechanized handling, and they are hand screw-nailed together to form the finished pallet.

Figure 3 shows a hand pallet jack load of finished pallets being taken away from final assembly to shipping. Figure 4 shows the modern method of loading aboard a box car by fork truck. Thus it is seen that from beginning to end, pallet production gains time and cost savings by the use of modern materials handling.

Fig. 3.



Fig. 4.



## AIRCARGO and the Feeders

(Continued from Page 51)

undertaken by the newly created California Aeronautics Commission.

For the short-hauls, the important thing is that the air freight industry as a whole cannot look to unretarded growth if the feeder problems are not ironed out in the process of development. It would be unlikely to expect great shipments of cargo from, say, Chicago destined for Eureka via San Francisco if the shipment had to be unloaded at that terminal and then trucked over winding roads to Eureka. Time gained in the terminal-to-terminal flight would be lost on the transfer and slow ground delivery.

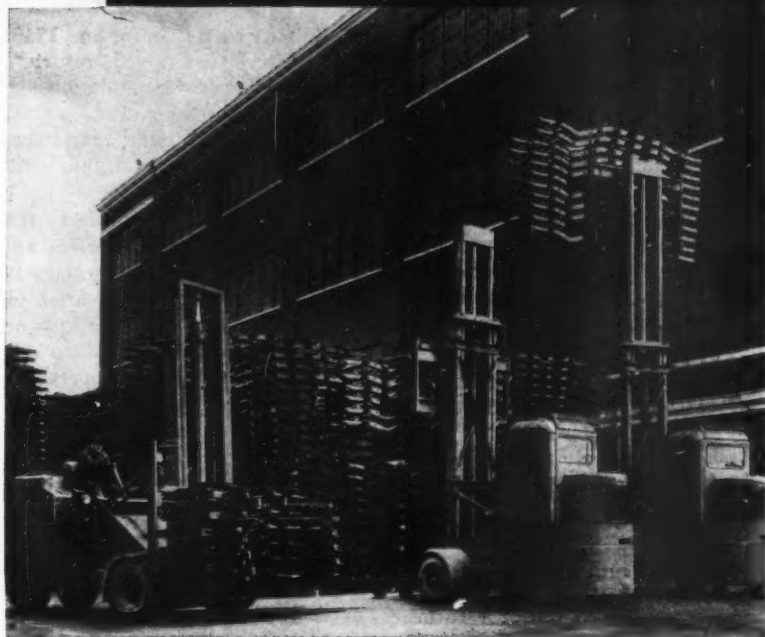
Also, we believe that it is the small berry grower, the baby chick hatchery operator, the rancher and farmer, who are looking to air cargo, rather than the large rail shipper and the car lot receiver. Heretofore dependent upon the freezer and the local market, they are now enabled to sell products fresh in far-flung markets. It is not difficult to see air cargo being used to good advantage in the distribution of the following: fresh tree ripened figs, cherries, apricots, mushrooms, spinach in ten or twelve ounce transparent bags, Italian squash, cauliflower, and many others.

In brief summation, the feeders must mainly count on one or both of two near future developments: the modification of equipment and schedules to permit combination cargo and passenger handling in volume, and/or the transfer of planeload shipments from long haul lines to short-hauls through interchange of equipment or some similar means.

Southwest's activities, like those of all feeders, are presently seriously curtailed by existing barriers, but not a moment goes by without thought and consideration to the overall development of this most promising facet of the transportation business.

# ROSS

## HEAVY DUTY LIFT TRUCKS



**chosen by A. O. SMITH CORPORATION,  
nationally known manufacturer,  
to handle automobile frames**

Cost of handling automobile frames has been drastically reduced since installation of ROSS Lift Trucks at A. O. Smith Corporation, Milwaukee, Wisconsin. Formerly handled singly, one man and a ROSS Lift Truck now handle and stack the bulky frames in unit loads of six or more at a time! And the job is done with far greater safety because the need for cable-riggers on the pile has been eliminated.

Hydraulic steering makes the operator's job easier and pneumatic tires assure all-weather indoor-outdoor operation.

ROSS Lift Trucks can simplify your handling problems and reduce your costs even as they have done for A. O. Smith Corporation. Get all the facts.



## THE ROSS CARRIER CO.

285 MILLER STREET, BENTON HARBOR, MICHIGAN, U.S.A.  
Direct Factory Branches and Distributors Throughout the World



## RATIOS, RATES AND REASON

(Continued from Page 40)

operating income than their total assets represent. A multiple of their capital plus all the money entrusted to them in long-term obligations passes through their annual income sheets. They must reproduce their funds many a time during the period of one year in order to show some earnings. And even a high percentage return on their investment is *no indication whatsoever of their power to produce substantial or even adequate profits.*

**HOW ABOUT RATE OF RETURN?** The term "rate of return" is used quite promiscuously in the discussion of economic problems relating to the proper rates and profits of common carriers. In order to facilitate our appraisal of these somewhat elusive terms, we confine ourselves to three uniform ratios between basic balance figures of the various groups under investigation. For the record, it may, however, be stated that "net rate of return" is now commonly accepted to express the relation between net income (after depreciation, interest, taxes and other charges and reserves, but before dividends) to the "net worth" (including the book value of outstanding stocks and non-corporate capital, plus accumulated surplus).

The "rate of return" represented as the relationship between the *net income* (before taxes) and the investment in *operating property*, carries all the characteristics we can expect with the knowledge gained so far. Public utilities show an even 10 to 13 percent, railroads 6 percent. But motor carriers have scarcely a rate of one percent in 1945, yet reach a steep 19 percent the next year.

The "rate of profit," or the relation between *net income* and *capital stock* shows analogous characteristics. While public utilities disclose a comfortable stability in their profit rate, motor carrier profit rates swing wildly from a 2.46 percent loss in 1945 to a

22.26 percent gain in 1946. Finally, the "net rate of return," as derived from the relationship between *net income* and *net worth*, demonstrates the same symptoms, although here the pendulum does not swing so wildly.

Thus, in years of prosperity the net return for motor carriers appears to be extremely favorable. Is this fact alone a true indication of this industry's prosperity or soundness? Certainly not. The wide gap between gross operating revenues and capital investments is the natural cause that even a modest margin of profit will be reflected by a seemingly high rate of return on a small investment. It means very little with regard to the actual amount earned. It only appears to be excessive if compared with other public utilities,

### New England Handling Show

The first regional materials handling show, to be held in Mechanics Hall, Boston, Oct. 5-7, has been announced. An unusually high attendance is expected, and many manufacturers and distributors of equipment have signified their intent to exhibit.

The following committees were established at an organization meeting held June 11th:

Show Management Committee, chairman, Norman L. Cahners, Modern Materials Handling; Local Arrangements Committee, chairman, George Miller, George E. Miller Co.; Booth Allocations Committee, chairman, Walter Metcalf, Stop & Shop, Inc.; Finance Committee, Robert Abel, Robert Abel Co.; Booth Sales Committee, A. Harvey, H. G. Davis Co.; Program Committee, co-chairmen, Norman Erlandson, Lewis-Shepard Products Inc. and James Gallery, Quincy Market and Cold Storage Warehouse; Publicity and Attendance Committee, chairman, Edmund S. Whitten, Edmund S. Whitten, Inc.

The Show Manager is Mr. R. Kennedy Hanson, who is secretary-treasurer of the National Materials Handling Institute. In addition to Mr. Cahners as Chairman, the Show Management Committee is made up of Lyman Nivling, Sales Manager, Lewis-Shepard Products Inc.; Cliff Hadrell, Lee Long Associates; Robert Abel, Robert Abel Co.; Arthur Harvey, H. G. Davis, Inc.; Walter Metcalf, Stop and Shop Inc.; Ralph Mount, Advertising Manager, Bassick Caster; Eldon Richardson, Traffic Manager, Lever Brothers; George Miller, George Miller Co.; Edmund S. Whitten, Edmund S. Whitten, Inc.

including railroads and pipelines. A recent survey in the monthly letter on economic conditions published by the National City Bank in New York reveals the following annual rate of returns based upon similar identical calculations.

In comparison to these figures, as gathered from an entirely different and undoubtedly unprejudiced source, the 15 percent net return of the common motor carriers in 1946 loses much of its explosiveness. Their net return appears to be quite in line and far from excessive or unique in view of very similar figures boosted by other industries. And lest we forget, these industries are large scale enterprises, their annual rates of return reflect very sizable figures in dollars and cents, and much outside capital is invested in them.

We do not hesitate to state on the strength of these figures that the business economics of the motor carrier resemble much more those of other non-regulated industries than those of public utilities, including railroads, and that from this point of view we may have to re-examine and re-appraise our general approach to this industry's rate problems. It appears almost to be an understatement of fact if we claim we are *not warranted to use the rate of return of motor carriers, railroads and public utilities indiscriminately and to try to apply the identical principle of a fair rate of return to all three of them.*

At this point of our study, we wish to inject still another critical consideration with regard to the aptitude of the rate of return as a yardstick for motor carrier rates. Table II shows the wide swing from 1.79 percent loss to 15 percent profit within two years. The 1945 figure even includes contract carriers, who generally appear to be the more prosperous and more stable members of the motor carrier family. If we would pursue the good fortunes of this industry during the fat and the lean years of the past, we would discover that this course of ups and downs is a quite regular recurrence in motor carrier economics. This industry is extremely sensitive to changing

trends and conditions. Slight variations in the relation between gross operating revenues and operating expenses will be reflected in substantial variances in the rate of return. The difference of approximately 3.5 percent in the relationship between operating revenue and total operating expenses in 1945 and 1946 drives the rate of return figures from minus 1.79 percent to plus 15 percent.

Would it be proper to adopt such an unstable and susceptible factor as the yardstick for reasonable levels of rates? Could any figure, which by the simple laws of arithmetic is constantly subjected to almost seismic disturbances, serve as the basis for sound assessments of incomes derived from regulated rates, when stability rather than fluctuation is essential? We believe that the shipping public as well as the carriers would be led into an impasse if the rate of return—except for being used for purposes of illustration and general information—should replace the principle of operating ratios in the determination of motor carrier rates.

WHAT IS WRONG WITH THE OPERATING RATIO? It can easily be admitted and explained why the operating ratio may serve as a proper criterion mainly for the efficiency of public utilities and railroads. Divested of all its adornments, the operating ratio states in one figure whether certain operations are managed properly and economically, so that the operation itself produces more revenue than its maintenance requires. This procedure will serve many a righteous and legitimate purpose for these industries. However, many factors may contribute to change completely the final financial result. Income and expenses outside the sphere of operations proper may boost or reduce the revenue substantially. The original capital investment or the burden of a vastly inflated method of financing, excessive long-term obligations entered into for purposes foreign to the actual objective of the utility or railroad business—all these may reduce a comfortable operating income to

(Continued on Page 68)

## Now—A Unique New Industrial Tire Development



### U. S. INNACUSH

Here is a completely unique development in the solid tire field—the U. S. Innacush Tire. Its softer inner cushioning cuts vehicle maintenance costs—lessens driver fatigue—reduces breakage. Yet, combined with the tough, wear-resisting outer tread, it provides *solid-tire* carrying capacity and long life. You'll want the Innacush on your powered industrial trucks.

**Made only by U. S. Rubber**

Call your U. S. Distributor.

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#### U. S. INDUSTRIAL TIRES ARE

1. Load Rated for every job. 2. Specified as original equipment on leading industrial trucks and tractors.
3. Made by the manufacturers of famous U. S. Royals.



**UNITED STATES RUBBER COMPANY**

SERVING THROUGH SCIENCE

# Handling Equipment Producers Meet

*Standardization, statistics, and government plans to set up a separate census classification for materials handling equipment highlighted discussions at joint summer meeting of Material Handling Institute and Caster and Floor Truck Manufacturers' Assn.*

CURRENT trends and developments and the need for more adequate statistical information on materials handling equipment were among the topics discussed at the joint summer meeting of the Material Handling Institute, Inc., and the Caster and Floor Truck Manufacturers' Assn., held June 29 to July 2, at Alexandria Bay, N. Y. Announcement was made of the government's decision to classify materials handling equipment separately from statistics relating to automotive equipment in the next Census of Manufacturers. The meeting also revealed that the Navy Department's Bureau of Supplies and Accounts is planning similar separation in connection with all of its materials handling control functioning. These announcements were based on correspondence among R. Kennedy Hanson, MHI secretary-treasurer; Charles H. Helsper, Industrial Machinery Section of the Department of Commerce, and H. E. Rodenbaugh, Jr., of the Navy Department's Bureau of Supplies and Accounts.

A study demonstrating the value of breaking down industry statistics into 96 trading zones was presented by W. Van C. Brandt, of The Electric Storage Battery Co., Philadelphia, and chairman of the Industry Statistics Committee. The lack of adequate statistics relating to industrial gas and battery-operated hand trucks was discussed at the meeting with the result that the secretary was instructed to begin

the compilation of statistics on the basis of monthly sales, by either units or dollars or on a percentage basis.

The meeting disclosed that "considerable progress" has been made by the committee devoted to standardization. L. E. Nivling, Lewis-Shepard Products, Inc., Watertown, Mass., acting chairman of the Standards Committee, stated that extensive correspondence had been carried on with members of the motorized lift truck industry in order to arrive at a consensus of opinion relative to sizes, capacities, weights, etc.

J. W. Wunsch, Silent Hoist & Crane Co., and chairman of the Chapter Committee, discussed a recommendation made at a recent meeting of the Board of Directors relative to the formation of a Material Handling Institute Chapter Advisory Board. This board would be composed of five manufacturers representing the Material Handling Institute, the Caster and Floor Truck Manufacturers' Assn., and a representative of the heavy materials handling industry. This board, Mr. Wunsch stated, would sit with one representative of each of the chapters now organized and function as a "steering" group.

The 1949 Materials Handling

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Again this year the month of October is Red Feather time in the United States—the time when nearly a thousand towns and cities will conduct their Community Chest campaigns. It is urged that all citizens support the Community Chest, thereby helping their neighbors and themselves.

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Exposition was discussed by Samuel W. Gibb, Yale & Towne Manufacturing Co., Philadelphia, and MHI president. More than 85,000 sq. ft. of exhibit space, Mr. Gibb stated, has been sold already and exhibitors to date number 180 as against last year's total of 197.

Use of the term "labor saving" in the advertising of materials handling equipment is having an adverse effect on industry-labor relations, it was pointed out by J. H. W. Conklin, of the Clark Equipment Co., Battle Creek, Mich., and a MHI director. Mr. Conklin discussed possible consequences arising from the indiscriminate use of the term and recommended that members review with their advertising agencies or executives scheduled advertising copy.

A discussion of a suggested slogan, "Mechanized Handling Reduces Costs," followed the reading of the report of Harry S. Webster, Jr., Publisher of DISTRIBUTION AGE, and chairman of the Public Relations Committee, with the result that the secretary was instructed to solicit slogan suggestions from members.

A poll disclosed that materials handling equipment producers look for a continuation of good business during the last half of 1948. Labor rates are expected to be higher, which may affect both raw material and selling prices. Cleveland, Ohio, was selected for the next meeting which is to be held Oct. 27, at the Cleveland Hotel.



## INTEGRATE HANDLING

(Continued from Page 35)

ments involved had gotten together before the installation was made.

In developing skid and pallet sizes for use within a plant, all departments should be consulted so that equipment can be used interchangeably. If the transportation system between departments is to be changed, studies should be undertaken in order to coordinate these sizes with the transportation means.

If the installation is to be flat bed motor trucks, such a study will help to determine the body size, and if the installation is to be a tractor trailer system, it will help to establish the size and capacity of the trailers and permit the handling of the right number of units without too much overhanging on sides and ends.

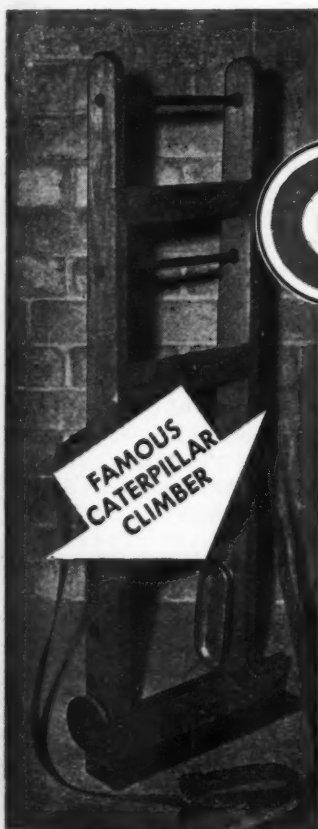
Materials handling should never be planned on a departmental basis. It should be worked out on an overall plant basis, and in conjunction with warehousing and distribution, it should be worked

out on an overall movement basis.

For example, some building material distributors are now considering the palletizing of their commodities to eliminate handling in the storage and distribution of the product. This is going to require a close coordination between the suppliers of such materials as cement, roofing, flooring, gypsum block, rock lath, etc., so that pallets can be made up in standardized units for quick sale without breakdown and for easy handling at the producer's plant, the distributor's plant, and the user's point of delivery. This requires consideration on top management level. Once such a unified system is set up, there must be co-operation from the purchasing department in the matter of specifying the way materials will come in for proper handling. It also is necessary for the traffic department to be cognizant of the need for proper handling, so that it will specify the proper carrier, so that when the materials are received at

the plant, they will pass through the receiving department with the minimum amount of handling and into stores, in such a way that inventory can be quickly taken. The units should be so developed that they can then be rehandled through the production department for processing, moving from there to the shipping and storing department within the plant for re-routing to the customer. In the case of a distributor of supplies, materials should be received in units which will permit sales by units, easy handling in receiving, storing, inventory, reshipping, etc.

Proper materials handling effects savings that are so great that it is of the utmost importance for top management to become interested in this subject, and to know of its advantages in all phases of receiving, production, shipping, distribution, etc. The requirements are such that it cannot be worked out satisfactorily and completely at a lower level. Therefore the writer suggests that top management give this important subject due consideration.



### New Method OF HANDLING WITH

## ESCORT TRUCKS

**The Escort Appliance Truck** for handling electrical appliances, refrigerators, water heaters, drinking fountains, stoves, etc. Also bookcases, filing cabinets, small iron safes and many other hard-to-handle items. Relieves strain, accomplishes a good delivery.

**The Escort Junior** handles trunks, boxes, small packages, etc.

**Both trucks equipped with the famous caterpillar roller bearing step climber.** Goes right up the steps or stairs on a fabricated rubber belt running over rollers set in a rigid aluminum frame.

**Both sold on a money back guarantee.** If not satisfied after fair trial return for refund of full purchase price.

*Write for Descriptive Folder and Prices*

**STEVENS APPLIANCE TRUCK CO.**  
P.O. BOX 897      AUGUSTA, GA.



## 600 OUT OF 12,000

(Continued from Page 52)

who require allocation of steel. At this time it will be immediately helpful to munitions manufacturers who have had some trouble in getting sufficient steel. In the future, under the pressure of what an emergency may bring forth, it is anticipated this unexpected priority clause in the law may channel steel and other fundamental supplies to the large producers, leaving the smaller manufacturers in a desperate situation. Senator Wherry, Chairman of the Senate Small Business Committee, issued a vigorous protest denouncing the "draft industry" section of the law, terming it unnecessary and "an opening wedge to a broader program of undesirable economic controls." He urges that the Voluntary Industry Agreements established by the Taft Act, Public Law 395, remain the national policy in order to maintain a free enterprise system.

This is the law under which John C. Virden, Director of the Office of Industry Cooperation in the Department of Commerce, has tried without much success to set up the system of controls and allocations which he himself regarded as impracticable. Under Section 18 in the draft law, plants may be seized as a penalty for non-compliance with priority orders, individuals may be imprisoned, and individuals or business units may be fined as much as \$50,000. The essence of this law was incorporated in the acts under which the national economy functioned during the last two wars. They were apparently regarded more as clubs to hold over the heads of those who might be reluctant or recalcitrant, rather than as actual instrumentalities for daily use. And it is emphasized by Wherry that these powers were made law previously only while we were actually in a war. Out of the fog of unexpected and confusing action which produced the present law gradually comes more sharply the picture that this part of the pres-

ent draft law is expected to be used in peacetime virtually in the same sense as the draft law is used to build an armed force in an uneasy period which is peace, but which feels as though it is the springboard to something that will not be so peaceful. The draft law includes a Section (18A) which provides that under "any program of national procurement, the President shall recognize the valid claim of American small business to participate in contracts, in manufactures, and in distribution of materials . . . For the purposes of the Section a business enterprise shall be determined to be small business if (1) its position in the trade or industry (of which it is a part) is not dominant, (2) the number of its employees does not exceed 500, and (3) it is independently owned and operated."

The mandatory controls phase of the law was written into the bill almost without knowledge of the majority of the Senate Committee. It was introduced as a "rider," and the debate on the floor revealed that the staffs of the army, air forces and navy were not aware of the provision until it was enacted. It apparently was introduced at the behest of Defense Secretary Forrester and Army Secretary Royall.

Later discussions reveal that all branches of operating utility industries are faced with the possibility of disruption of delivery schedules on badly needed equipment if the military priorities dislocate the present tempo of manufacturing operations. The "draft industry" clause applies not only to steel but to any industry which supplies food, metal products, chemicals, or any other materials required by the armed services or the Atomic Energy Commission. Manufacturers of electrical equipment, radio and telephone equipment, steel pipe, and all forms of transportation facilities are among those regarded as more or less im-

mediately subject to "allocation orders."

The steel industry is expected to be the guinea pig for the development of the system or pattern to be used. Steel people are especially angry about the sudden legislation. They underline that it was jammed through without hearings and without industry consultation. They say they expect it will usher in another era of "priority controls" for all essential products. The Chairman of the National Security Resources Board already has held a series of conferences with Munitions Board officials. Out of these meetings is expected to come the method of operation. National Security Resources Board is expected to certify the mandatory allocation orders. NSRB is expected to give notice and to clear the various steps with industry. The Munitions Board, an all-over military unit, is expected to exercise the essence of the power which will determine when and to what extent a mandatory order will be issued.

The Carrier Agreements Act, introduced by Senator Reed and Congressman Bulwinkle, finally was lustily passed by the Congress despite the Truman veto. The Senate overrode the veto by a vote of 63 to 25; the House voted the President's objections down by a vote of 297 to 102. Broadly, under the terms of law, the carriers under the jurisdiction of the Interstate Commerce Commission are able to make rate agreements without fear of prosecution under the anti-trust laws when their agreements meet the approval of the ICC.

The Reciprocal Trade Agreements debate finally was decided without a Presidential veto. The House and the Senate extended the law for a year, but the interdepartmental committee which hitherto has in essence formulated tariff policy has been washed out by the new law. This means the Tariff Commission alone makes the recommendations, without the cooperation of the Departments of Labor, State, Commerce, Treasury, Agriculture, and the National Military Establishment. By the terms of the law now on the books, the Tariff Commission is the sole

source of council, and sends its recommendations to the President, as well as to the Congress. The original formula of H. R. 6556 provided that the Congress had the power of ultimate approval or disapproval of the Tariff Commission's recommendations. As the law was finally adopted, the President may disapprove of the recommendations if he is moved to do so; but if he wishes to run counter to the recommendations he must make his objections very clear to the Congress in a message; and it is obvious that in thus placing himself on record he is opening himself to a debate of nationwide proportions, possibly world-wide criticism. It is scarcely probable that any President will often try to override the highly professional counsel of the experts in the commission, established presumably for competence in this area of the socio-economy. The present law expires on June 30, 1949.

The 81st Congress has been requested formally to proceed to draft a new Reciprocal Trade

Agreements Act as soon as it comes into existence in January of next year.

The nation-wide debate stirred up by the Supreme Court's decision in the multiple basing point case gives interesting point to the study made by the Treasury Department on the subject of the effect of federal excise taxes on transportation. In 1947 the 15 percent tax on transportation of persons produced \$244,000,000 revenue, and the three percent tax on transportation of property brought revenue to the extent of \$275,700,000 into the Treasury. It was found that the increased cost of travel due to tax does not greatly affect business and the most urgent personal travel, but may materially affect the volume of pleasure travel due to substitution of the automobile for other travel means. Coach travel on the railroads is particularly sensitive to changes in passenger fares. Bus travel is reported to be less sensitive to increases in the cost of transportation. The upward trend

in this form of travel would tend to offset in part reduction in travel caused by the tax. The tax has been found to produce a shift in travel from the higher priced to the lower priced types. The tax takes a higher proportion of income from the lower than from the higher income groups.

Tax on transportation expenditures made by business firms is likely to be reflected in prices paid by consumers in the long run, and thus be distributed in accordance with consumer expenditures. Tax on transportation of property is reported to increase business costs generally but not uniformly.

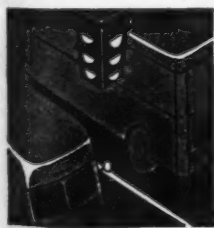
Where there is a significant difference in rates between carriers, the tax will widen the difference in favor of the lower priced services. Generally, water and railroad freight rates are lower than truck and express rates. Although the tax falls largely on business costs, business will endeavor to pass it on to consumers. The tax tends to increase the price of goods more than services.

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## Van Bodies



## STANDARDIZATION

(Continued from Page 32)

specifications is included in the check list accompanying this article. Representatives of marine underwriters and ship owners, who were interviewed by the writer, were unanimous in commending the use of the JAN and other military specifications. The general consensus of opinion was that the military specifications were, if anything, too good, and that the individual shipper might, if he so wished, modify the requirements contained therein.

Unlike most other phases of distribution, water transportation has primarily been standardized by the federal government rather than by the carriers themselves. Perhaps in no other phase of distribution have owners and operators allowed the development of standards to be out of their control to such a degree. The major exception is in the standardization of design, construction, and maintenance of vessels. Here, American shipbuilders, ship operators, marine insurance companies, and shippers of cargo are joined together in the American Bureau of Shipping, and through this agency, they control to a considerable degree the standardization of American vessels. The bureau, a non-profit organization founded in 1861, through its world-wide corps of surveyors, functions to supervise and standardize ship construction and maintenance. At the outset of the ship's creation ABS surveyors check drawings and blueprints to see if they meet with specifications. They supervise the production of raw materials and finished parts as well as actual ship construction. ABS standards and specifications are contained in a large volume titled "Rules for Building and Classing Steel Vessels." As indicated in the title, the bureau assigns classifications for practically all American vessels and published these class designations in their *Record*, wherein are detailed construction methods, materials, means of propulsion, and other important details for every vessel on record. These volumes are often referred to as the

"bible" of the American Merchant Marine. The bureau's surveyors, located in every important world port, check maintenance of American vessels to see that assigned classifications are maintained.

Also vitally concerned in the construction of American vessels is the United States Coast Guard, a strange sort of federal entity which in peace operates within the Treasury Department and in war as part of the navy. Insofar as water transportation standards are concerned, the Coast Guard's duties entail "the approval of plans for the construction, repair, and alterations of vessels; the approval of materials, equipments, and appliances; and the issuance of certificates of inspection and permits . . ." In addition, the Coast Guard serves to promulgate and enforce "rules for lights, signals, speed, steering, sailing, passing, anchorage, movement, and towing of vessels." In general there is little conflict between the Coast Guard and the ABS, as can be seen from the following quotation taken from Coast Guard regulations concerning standardization. "In the inspection of hulls, boilers, and machinery of vessels, the rules promulgated by the American Bureau of Shipping respecting materials and construction . . .

and the certificate of classification referring thereto . . . shall be accepted as standard by inspectors." Standards issued by this agency are of primary interest to ship owners, builders, and vessel operating forces; however, they are included in the check-list because of their secondary interest to all who are concerned with shipping by water transportation. Standards issued by the Coast Guard and the ABS are, however, of importance to all in distribution, because only through such standards can the American Merchant Marine be a safe and sure means of transportation. Just as the standards issued by the Assn. of American Railroads have resulted in safer and better rail transportation, so too have the standards discussed herewith resulted in American vessels which are equal or superior to ships of other nations.

The U. S. Maritime Commission, although it is vitally concerned with the development of a sound American Merchant Marine, has (to quote from a letter to the writer) "promulgated no standards for the shipment of cargo, the construction and operation of vessels, regulation on insurance, bills of lading or terminal operations. Regarding construction of vessels, the commission follows regulations promulgated by the United States Coast Guard . . . and other agencies concerned with these matters."

In publications issued by the Bureau of Foreign and Domestic Commerce of the Department of Commerce are to be found the few existing standards on ship stowage and cargo handling. These, included in the check-list, contain specific listings of approved storage, packing, packaging, and stowing methods which can be adopted in whole or part by shippers and ship operators.

A casual stroll through the hold of an outbound freighter would reveal clearly the deplorable lack of standardization in packing and packaging—not so much because standards for these purposes do not exist, but because they are not being used widely. The steel bars that are scattered loosely in the

### Oil Tanker Capacity

A heavily-loaded oil tanker, plowing along in mid-ocean usually doesn't look very impressive, because, like an iceberg, its volume is largely under water. But figure the volume of oil carried in a single tanker on a single voyage. The average tanker being built now is of 27,500 tons capacity. How much oil is 27,500 tons? It amounts to about one million cubic feet, in round numbers. How much is that? We all see large oil storage tanks in various parts of the country. They look big because they are entirely above ground, not concealed under water. One of these tanks is considered "large" if it holds 120,000 barrels. A barrel contains 4.27 cu. ft., hence 120,000 barrels amounts roughly to 512,000 cu. ft. This makes the capacity of an oil tanker about two of these large storage tanks. Figure the size of these tanks: approximately 100 ft. in diameter and 65 ft. high—two of these per tanker per trip.—W. F. S.

hold could very readily have been packaged correctly according to the standards developed by the American Iron and Steel Institute. The expensive machinery crated in a feeble wood case could have been packed properly if the provisions of JAN-P-104 were followed. The standards are available—they should be used.

A similar stroll a few weeks later through a warehouse in a foreign port would indicate clearly the results of non-standardization. Parts are damaged due to handling, canned goods are minus their labels, crates and cartons have been opened and their contents pilfered. The Foreign Cargo Claims Committee of the American Merchant Marine Institute, in speaking of export packaging, has the following to say: "Far too many cartons arrive at destination in a crushed or otherwise damaged condition, not primarily due to rough handling, but as a result of the fact that the construction of the carton is not adequate for export . . . such damaged packages are readily susceptible to theft."

Speaking further on the problem, they add that "it is questionable, from a loss standpoint, which is the cause of the greatest monetary losses in foreign trade—the packaging or the marking." They go on to indicate several instances of poor marking and resultant losses. They conclude, rather wistfully, "that the British seem not to depart from the essentials in packaging and marking to the same degree that America does . . . That is perhaps one reason why they can so proudly declare, 'Britain Delivers the Goods.'"

One reason for the superiority of British packaging is the excellent packing and packaging standards developed by the British Standards Institute. The United States counterpart to BSI, the American Standards Assn., has no such standards. Nor do shippers and their associations have such standards, despite the fact that committees on this subject are functioning. For one phase of packing and packaging the shipper can, and often must, refer to the federal government. Specifica-

tions for packaging and packing dangerous cargoes, including explosives, inflammable solids and oxidizing materials, corrosive liquids, compressed gases, and poisons are published by the Interstate Commerce Commission under the title, "Regulations for Transportation of Explosives and other Dangerous Articles" and by the Coast Guard in their publication, "Explosives and other Dangerous Articles on Board Vessels." Both are listed in the accompanying check-list.

The need for correct marking practices as mentioned above is of tremendous importance in proper shipping. Almost all the standards included in the check-list contain sections dealing with this problem. Part II of "Custom Regulations of the United States" include detailed instruction on proper marking of shipments.

The machinery of distribution to be seen along the New York waterfront and in other American ports is in many ways creaky and inefficient. Standardization will ease the squeaking.

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## NATIONAL TRANSPORTATION POLICY

(Continued from Page 53)

of all styles of transportation is to render adequate, efficient, and convenient services for shippers and travelers at the most reasonable charges consistent with the enlightened treatment of the carriers. Charges for services should be as low as they can be made.

Carriers and shippers, as well as those of the general public who have any informed opinion on the matter, are in fairly general agreement that we already have a national transportation policy, both sound and reasonably comprehensive. Any assertion that we do not have such a policy is directed to administration rather than legislation. It is quite apparent that the statement of national transportation policy found in the Interstate Commerce and other Acts is thought to be sound. The statement contains a clear recognition of the true objectives of the public interest in transportation, viz., that this nation shall have an efficient and economical system of transportation, adequate for the needs of peace and the demands of war, and that each agency of transportation shall be given a fair and equal chance to do that part of the total task which it can do best.

The essential point of the present congressional declaration of a national transportation policy appears to be equality of treatment for all forms of transportation, in all respects. This objective cannot be achieved merely by regulation of rates and services in a manner which might appear on the surface to produce equality among the several transportation agencies. Such seeming equality can be made of little or no effect by the government's dealing with transportation in matters other than regulation. There can, however, be no sound system of transportation without a sound policy—consistent, however, in all of its parts and actually followed.

On the matters so far mentioned there is quite general agreement. The point is how should Congress proceed to improve the situation

through legislation. Several of the suggestions which have been offered might be mentioned:

1. Place all regulation under one agency.

2. Discontinue the participation in the promotion of common carrier activities by federal government agencies.

3. Provide for the voluntary coordination of the services of carriers both of the same type and of different types, to the end that each carrier will perform for the public the service for which it is best adapted.

4. Provide for the common ownership and operation of carriers of different types subject to proper requirements of a regulatory body and to sensible restrictions to insure against unreasonable restraints of competition.

5. Discontinue government aid to transportation, since all carriers should pay their own way, except in very rare instances where private capital cannot, or will not, provide the service, or because certain transportation facilities loom large in our system of national defense.

Suggestions and assistance are welcomed by the committee; but it must be recognized that little progress is possible with so complicated a problem if shippers and carriers adhere to past procedure, which has usually been to promote their own particular theories and positions. The committee expects that interested groups will take every appropriate step to reconcile points of view and bring about common accord on the issues of the problem.

There are really no insurmountable obstacles in the path of a sound and lasting solution, if we bear in mind that what we are dealing with is *transportation as a service to the public*. Patience in giving careful consideration to all phases of the problem should not mean too much delay.

The interest of the House Committee on Interstate and Foreign Commerce in a sound national transportation policy goes far beyond a mere statement or declaration of policy and looks to the formulation of the actual statutes which are enacted to implement and actuate the policy. There are a number of measures now pending before Congress which are of the greatest importance in this connection. I should like to call attention to certain of them.

The first among these is the bill dealing with rate conferences and other forms of collaboration by regulated carriers subject to the Interstate Commerce Act. This bill is H. R. 221, and is generally known as the Bulwinkle bill. It has been favorably reported by the House Committee on Interstate and Foreign Commerce. A similar bill was passed by the House in the 79th Congress, the vote being 277 to 45. A similar bill, S. 110, has been passed by the Senate in this Congress, the vote being 60 to 27. Certainly, this measure should be written on the statute books with as little delay as possible. This is not to argue the merits of the Bulwinkle bill, nor to stress the fact that it has the overwhelming support of those who are directly interested in or concerned with transportation. It may not be out of place, however, to say that until this bill becomes law and places rate conferences and similar activities under the control and supervision of the ICC, an almost insuperable barrier will be found to the effectuation of a sound national transportation policy.

Another pending bill which has a bearing on the national transportation policy is H. R. 5318, providing for the disposition of the Federal Barge Lines now being operated by the government. There was a hearing before the House committee on that bill on Feb. 25. Proponents explained fully why they thought the government should not conduct a financially unsound transportation operation in competition with other transportation agencies which must pay their own way. It is thought by many that no declaration of trans-



portation policy would completely serve its purpose if it is to be ignored by such undertakings as the Federal Barge Lines operations. In this connection there is pending in the Senate a bill, S. 2296, which would authorize the use of \$18 million more of government money for Federal Barge Lines purposes.

There have also been a number of important bills introduced and referred to the House Committee on Interstate and Foreign Commerce as a result of the activities of the Congressional Aviation Policy Board. Of these the following might be mentioned:

H. R. 6144 provides for many improvements in the government organization to deal with domestic and international civil aviation problems. It restores the independence of the CAB and authorizes it to organize its work in better fashion through delegation of functions to individual members and to subordinates. It strengthens the Air Coordinating Committee and gives it increased power to coordinate the overall aviation policy of the government.

H. R. 6149 would bring contract carriers engaged in interstate operations under regulation by the CAB, placing it in line with the regulation of motor contract carriers.

H. R. 6147 retains exclusive safety jurisdiction over all flying in the federal government, but empowers state courts and aviation agencies to enforce the penal provisions of the Civil Aeronautics Act relating to safety, and also to suspend pilot and other certificates for violations of the laws or regulations promulgated by the CAB. This will avoid duplicating or con-

flicting state regulations and enable local courts and agencies to handle violations of the laws and regulations locally.

To untangle the overlapping and conflicting laws which now comprise common carrier regulation, and to design a new and harmonious system of regulation which will meet the present and foreseeable requirements of national defense, the postal service and the commerce of an ever-expanding economy—and yet provide the basic financial and operating structure which will attract private credit to this industry—is, in essence, the most crucial economic problem before this country.

It is well to take time. The stakes are high—very high. We have been years getting into this transportation dilemma, with sections of the country, users and investors, and the different forms of transport too often primarily concerned only with their vested interests. The time has arrived to join hands in a composite public-interest approach for the United States as a nation.

### 58th AWA Convention

Reservations are already being accepted for the 58th Annual American Warehousemen's Assn. Convention, to be held in San Francisco, Feb. 7-10, 1949. The Fairmont Hotel is convention headquarters, with the Mark Hopkins and the Sir Francis Drake, both nearby, as additional hotels. The convention is to be held at the same time as San Francisco's centennial celebration of the gold rush of 1849, and a worthwhile convention is promised. Members and friends of AWA are urged to send in their reservations as soon as possible, as it is always easier to cancel by Jan. 15 than to try to get a room at a late date.

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# DISTRIBUTION



By L. H. WOHLWEND

*General Sales Manager, California Fruit Growers Exchange*

**"D**ISTRIBUTION is our business" might well be the motto of the nation's largest fresh fruit cooperative marketing organization, the California Fruit Growers Exchange. The proper distribution and sale of oranges, lemons, and grapefruit to all markets of the world is the primary objective of this cooperative, which represents 14,500 California and Arizona citrus growers.

The Exchange takes distribution more seriously than many other sales organizations. It actually watches and guides its products from its 206 packing houses in the West right into the shopping bag of the ultimate consumer. Unlike the organization which considers its distribution job finished when a sale is made to a broker or wholesale dealer, the Exchange follows clear through the retail store.

The idea of facilitating distribution by working directly with retail dealers was first started by the Exchange in 1915 following a study by the Harvard School of Business Administration. At that time, few retail grocers handled any volume of citrus fruit. Most of them did not display citrus properly and few of them priced it properly for maximum sales.

Feeling that the retail dealer might be a bottleneck in the pipeline of distribution, Exchange executives sat back and took a long look at their distributive program. They were selling fruit to wholesale dealers. They were supporting that sale by an advertising

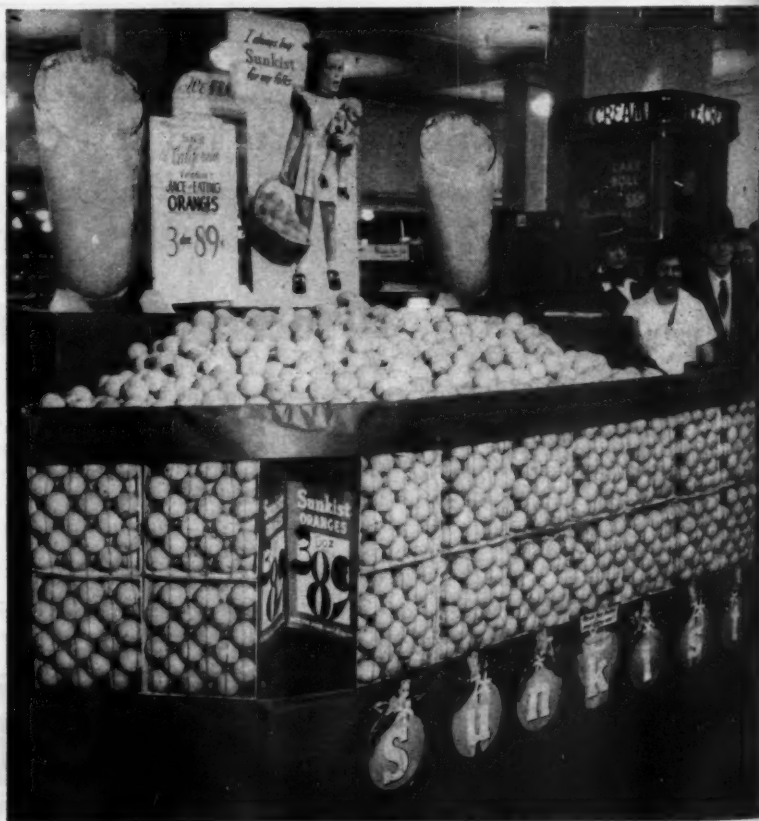
*In the distribution of citrus fruits, the world's largest fresh fruit cooperative "follows through" . . . from the time products leave its 206 packing houses until they are in consumers' shopping bags.*

program in consumer media—but still the consumer wasn't able to get citrus fruit easily and at the right price.

The research at Harvard proved that the retailer was the bottleneck. He was not entirely to blame, since he had never had anyone tell him why he should exert any special effort to sell oranges and lemons. In the large cities, the "greengrocer" handled fruits

and vegetables; in the small towns most vegetables were grown in home gardens, so the retailer hadn't considered the possibility of citrus sales. If he did handle oranges, he still considered them a luxury and overpriced them.

Immediately the Exchange organized a small staff of dealer service men whose main purpose was the education of retail dealers into the profit possibilities of



# IS OUR BUSINESS



From the fruit on the trees in the orchard, above, to the dealers' aids in the display in the retail store, left, the California Fruit Growers Exchange follows through in distribution of its products.

the proper handling of citrus fruit. The Exchange gave this staff a good assortment of attractive display material and showed them how to best display their wares.

One big advantage enjoyed by the Exchange representatives was the fact that they literally "had nothing to sell." They were merely on a service mission. The retailer continued to buy his citrus fruit from his regular wholesaler. The only requirement for display service was that the retailer should handle Sunkist fruit.

So successful was the initial attempt at dealer education that the Exchange has employed this method of assisting distribution ever since. Today the Exchange is spending about \$500,000 annually in this distribution aid activity.

In addition to showing dealers how to handle citrus fruit, our

dealer service men encourage *new* dealers to carry the products. While most grocery stores do sell oranges, lemons and grapefruit, there are still many who do not sell as great a volume as they might. Exchange men work with them; build displays for them; show them how to price; and demonstrate that citrus is a profitable volume item.

Thus the Exchange follows the distribution of fruit from the time it is picked from the tree until it reaches the ultimate consumer. As it passes through the packing house, Exchange inspectors guard the quality standards. After it is loaded in the refrigerator car, our traffic department makes sure it arrives at its destination by the quickest and most efficient route. In the consuming market, it is sold to wholesalers by Exchange salesmen and while ownership of the

product is there transferred, the Exchange continues to aid in its movement and sale through the entire distributive field.

In 1948, Exchange men will call on more than 100,000 leading retail and wholesale dealers of the United States and Canada. They will install more than 50,000 displays designed to improve sales. Educational motion pictures showing the proper handling of *all* fresh fruits and vegetables will be shown to more than 35,000 grocers.

The effectiveness of this work is emphasized in a recent government survey covering self-service food stores in northern New Jersey where that type of operation is very prevalent. The survey showed that citrus fruit enjoyed the greatest dollar volume of sale of any fresh fruit or vegetable commodity, averaging over \$190 per week per store.



## RATIOS, RATES AND REASON

(Continued from Page 57)

negligible returns on the net worth.

On the other hand, income from the leasing of rights and franchises, from investment in other enterprises, from successful financial managements, may improve even a poor operational result to full satisfaction. Yet, the production of dividends for the shareholders being the primary financial objective of the enterprises, it is only the final profit which counts. Rightfully, therefore, railroads strive for a fair return on their net worth, in order to protect the old investors and to attract new ones. Rightfully also is the scale of rates in public utilities measured against the net return. Consequently, it does not necessarily mean that a railroad or a public utility is flourishing if its operating ratio oscillates around 60 percent or that a railroad is on the verge of bankruptcy if its operating ratio climbs to 80 percent, although in both cases these

figures may be quite significant for other conclusions.

The picture is quite different if we scrutinize motor carrier finances. In the first place, we have to remember that their entire financial structure leans very heavily toward operating figures and reduces capital, long-term obligations and surplus to minor roles. Small improvements or regressions in the operating net income will exercise a disproportionately large

and distorting influence upon its rate of return. It should not be overlooked that outside investments are very rare with motor transportation, that a large part of its investments are still in the hands of the original owners and founders or their immediate families, frequently gainfully employed in the enterprise, and that very little public or speculative funds are invested in them.

It is not only because of the lack of any better method, but because we are compelled by the logic of mathematical laws and of the financial structure of the motor carrier industry, that we turn to the operating ratio as the most ade-

Table III

Industrial Groups	Annual Rate of Return %		
	1st half 1946	2nd half 1946	1st half 1947
Food Products .....	15.2	23.2	20.8
Brewing & Distilling .....	39.8	51.0	24.7
Textiles & Apparel .....	16.5	27.4	19.0
Chemicals & Paints .....	14.7	16.5	18.0
Drugs & Cosmetics .....	29.1	25.1	11.1
Iron & Steel .....	4.6	10.0	11.5
Machinery .....	6.8	13.8	16.7
Autos & Trucks .....		15.3	20.5
Total Manufacturing .....	8.6	15.4	16.8
Trade (wholesale & retail) .....	21.7	23.4	16.0
Service & Amusement .....	13.3	15.8	12.6

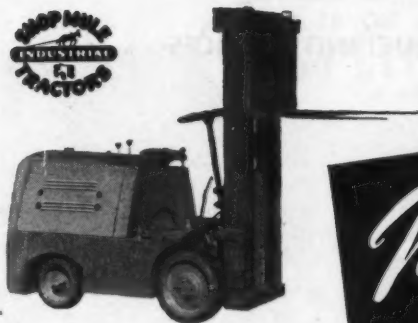
Table II

	MOTORS CARRIERS		RAILROADS		PUBLIC UTILITIES			
	Common Carriers General Commodities Class I	Carriers of Property Common & Contract Class I	Class I Railroads		Natural Gas Companies		Privately Owned A & B Electric Utilities Companies	
	1946	1945	1946	1945	1946	1945	1946	1945
Operating Revenue in Relation to: (%)								
Total Assets .....	38.09	36.6	329.40	291.5	505.94	502.8	474.0	478.9
Total Operating Expenses before Taxes (Operating Ratio) ....	96.47	99.9	88.69	79.21	64.89	62.35	60.18	58.11
Net Income before Taxes .....	5.53	.22	6.94	14.31	30.45	30.30	39.94	42.57
Net Income after Taxes .....	2.36	.30	3.76	5.03	19.20	17.2	21.73	22.22
Long Term Debts .....	7.36	5.62	119.20	103.44	135.40	132.9	161.19	166.8
Capital Stock .....	10.58	12.11	105.88	90.50	152.30	149.5	155.67	164.6
Total Surplus .....	5.11	4.58	60.81	51.77	41.22	43.3	33.09	27.3
Net Worth .....	15.69	16.69	166.70	142.2	193.51	192.8	188.77	191.9
Rate of Return on Net Investment in Operating Property (before Taxes) (%) .....	18.87	.94	3.23	6.14	10.64	12.64	11.47	13.53
Rate of Profit to: (%)								
Capital Stock before Taxes ....	33.36	1.83	6.55	12.39	19.99	20.24	22.43	20.59
Capital Stock after Taxes .....	22.26	-2.46	3.56	5.59	12.60	11.45	10.74	8.82
Net Return % of Net Worth .....	15.01	1.79	2.26	3.86	9.92	8.88	8.85	7.58
Operating Income % of Net Operating Property .....	20.43	.93	5.27	8.61	11.89	12.64	13.11	13.53
Long Term Debt % of:								
Net Operating Property .....	39.32	33.86	55.55	57.14	47.33	46.3	52.52	53.07
Net Worth .....	46.88	35.59	71.49	73.29	69.94	68.87	85.38	86.67
Total Assets .....	19.31	15.36	36.18	35.77	26.76	26.43	32.23	34.84
Net Worth % of Capital Stock ..	148.29	137.8	157.2	157.2	127.00	128.9	121.25	116.58

quate, if not the only acceptable yardstick for the examination of the propriety, justness and reasonableness of motor carrier rates. The margin between income and expenses for motor carriers in their operation is exceedingly small. Most of their costs are directly attributable to the operation for which they were incurred. Outside the actual operation, there is little room for the upward or downward correction of the operating ratio. And even the slightest swing in one direction or the other of the operation's profit will be reflected in a distorted and misleading ratio of the net return on net worth.

We feel, therefore, that we have proved our point—that quite differently from those of railroads and public utilities, motor carrier rates should be measured on the basis of their operating ratio. Other considerations should be applied only in isolated cases if specific circumstances may warrant it. The rate of return is no proper yardstick ever in rate cases, particularly not if the motor carrier's rate of return is compared to his disadvantage with corresponding figures of railroads and public utilities, instead with the extremely close figures of other industries or trades. The use of the operating ratio is not only logical but also the method most commensurate with motor carrier economies, their financial structure and the interest of the shipping public.

After we have so laid the groundwork of a sound and proper general appraisal of the problem and tried to find a conclusive statistical answer, we shall—at some later occasion and based upon recognitions gained so far—study some of the more detailed problems of motor carrier finances. We name only the question of the different treatment of various types of motor carriers (common, contract, general or special commodities, employing own or hired equipment), the problem of averages and of owner's salaries and expenses, which are some of the popular arguments frequently advanced or defended in rate proceedings.



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## NEW TRUCKING SERVICES

(Continued from Page 37)

"Of course, providing it is in a position to make a well-founded showing relative to the alleged necessity," McCormack answered, "but that an applicant is financially able and desirous of extending its operations is no evidence that public convenience and necessity require it.<sup>15</sup> For example, just because the source of supply of one shipper has been shifted does not justify granting an extension to a carrier.<sup>16</sup> On the other hand, the commission has authorized extension of operations to permit the use of a more direct route;<sup>17</sup> to eliminate back-haul and transfer;<sup>18</sup> to provide direct truck service, avoiding necessity to ship oil by rail to intermediate point thence by truck;<sup>19</sup> to serve points not otherwise served by motor carriers."<sup>20</sup>

"In the publishing of rates and charges, and the filing of same with the commission, do the common carriers and the contract carriers use similar tariffs?"

"From a technical viewpoint, John, they do not. Section 217 (a) of the Act provides for the filing of tariffs by common carriers 'showing all the rates, fares, and charges for transportation,' whereas Section 218 (a) specifies 'schedules of contract carriers'."

"In permitting motor truck carriers to publish certain rates what reasons guide the commission?" Merten questioned.

"There are at least half a dozen elements," replied McCormack, "and these are referred to in the Act. Basically the commission is required to give due consideration to the need in the public interest of adequate and efficient transport service and to the need of revenues sufficient to enable motor carriers under honest economical, and efficient management, to provide such service.<sup>21</sup> In exercising its power to prescribe just and reasonable rates the commission is required by Section 216 (i) to consider the need of revenues sufficient to

enable motor carriers to provide efficient service."<sup>22</sup>

"Can a common carrier charge rates other than those listed in its tariff?"

"Quite the contrary," protested McCormack. "After passage of the Motor Carrier Act it became unlawful for common carriers by motor vehicle subject to its provisions to transport for any shipper at any rate different from their published and filed rate."<sup>23</sup>

### Pacer Committee

The newly-formed "Pacer Committee" of the National Assn. of Refrigerated Warehouses, the letters of which stand for Progress, Action, Coordination, Education, Research, is the working unit which will spark the association's expanded public and allied industry relations program. Its work will be to coordinate the action of all industry segments, including the technical and scientific work of the Refrigeration Research Foundation, into a concerted program to educate warehousemen, employees, customers, allied trades and the general public to the services and importance of refrigerated warehousing. This will be done by research, activating and energizing industry committees, news-casting and bulletins, pamphlets, meetings, cooperation with allied and customer industries, legislation, and public speaking appearances. The formal christening of the new committee is expected to take place at the San Francisco AWA meeting Feb. 9, 1949.

"In the case of contract carriers, must they file with the commission copies of their contracts, which they have with shippers, as well as their schedules?" Merten demanded.

"Unquestionably," asserted McCormack. "A basic principle of carrier regulation is that full publicity of a carrier's charges is necessary and desirable in the public interest.<sup>24</sup> No shipper can justly complain if the charges he pays for transportation are made public. The commission has the power to establish general rules and regulations with which contract carriers must conform.<sup>25</sup> Such power is not unlimited, may not be arbitrarily exercised, but permits requirements which will aid in practical administration, and furtherance of the purpose to promote and protect adequate, efficient motor carrier service in the public interest."

"Are there any penalties specified for evasions of the terms of the Motor Carrier Act?" Merten inquired.

"Certainly," McCormack stated, "and the form of acceptance or concession is immaterial if unlawful preference or prejudice results."<sup>26</sup>

"Do the penalties have to do only with the carriers?" Merten asked.

"They apply to both the carriers and the shippers," McCormack explained. "Section 222 (c) of the Act covers evasion of regulations, etc. To give you an idea I'll quote a portion of that section and keep in mind that the word 'person' as used in the quotation means 'corporation' also. 'Any person, whether carrier, shipper, consignee, or broker, or any officer, employee, agent, or representative thereof, who shall knowingly offer, grant, or give, or solicit, accept, or receive, . . . upon conviction thereof be fined not more than \$500 for the first offense and not more than \$2,000 for any subsequent offense.'"

NOTES. Numbered symbols refer to citation from ICC decisions.

<sup>1</sup> See 20 M. C. C. 226.

<sup>2</sup> See 3 M. C. C. 284.

<sup>3</sup> See 11 M. C. C. 535.

<sup>4</sup> See 16 M. C. C. 566.

<sup>5</sup> See 12 M. C. C. 581.

<sup>6</sup> See 6 M. C. C. 105.

<sup>7</sup> See 12 M. C. C. 485.

<sup>8</sup> See 6 M. C. C. 477.

<sup>9</sup> See 1 M. C. C. 187.

<sup>10</sup> See 26 M. C. C. 741.

<sup>11</sup> See 26 M. C. C. 741.

<sup>12</sup> See 3 M. C. C. 284.

<sup>13</sup> See 6 M. C. C. 257.

<sup>14</sup> See 3 M. C. C. 156.

<sup>15</sup> See 17 M. C. C. 123.

<sup>16</sup> See 18 M. C. C. 149.

<sup>17</sup> See 20 M. C. C. 223.

<sup>18</sup> See 8 M. C. C. 777.

<sup>19</sup> See 23 M. C. C. 261.

<sup>20</sup> See 9 M. C. C. 425.

<sup>21</sup> See 4 M. C. C. 68.

<sup>22</sup> See 17 M. C. C. 255.

<sup>23</sup> See 17 M. C. C. 549.

<sup>24</sup> See 20 M. C. C. 8.

<sup>25</sup> See 1 M. C. C. 628.

<sup>26</sup> See 4 M. C. C. 657.



## PALLETS

(Continued from Page 46)

ratings of 27½ and a minimum weight of 36,000 lb. on a certain type of pallet where the l.c.l. is class 60, and this rating too has restrictions.

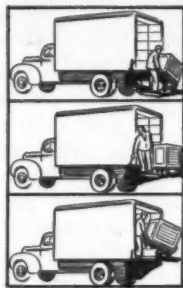
In the matter of using pallets for dunnage, complainants contend that the maximum allowable weight for dunnage in the CFC Rule 30 should be increased. Five hundred pounds doesn't decrease freight charges much, they maintain. The use of dunnage helps anchor the load firmly and prevent shifting, makes the load more compact and uniform and allows quicker and easier loading and unloading. This is to the advantage of shippers and carriers alike, since an idle car doesn't earn money. It has also been proven many times that goods stacked on pallets can be loaded and unloaded quicker, again saving time for both parties.

It is on these contentions that the advocates of lower rates and changed ratings for pallets base their case. With these new rates and ratings they seek, they maintain that pallets will come into more widespread use and will further the cause of mechanical handling with its attendant benefits.

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## REASONABLE FREIGHT RATES

(Continued from Page 23)

The over-all objectives of the national transportation policy are stated to be the development, coordination and preservation of "a national transportation system by water, highway and rail, as well as other means, adequate to meet the needs of the commerce of the United States, of the Postal Service, and of the national defense." All of the provisions of the Interstate Commerce Act are directed by the Congress to be administered and enforced with the view of carrying out this declaration of national policy.<sup>5</sup>

The Interstate Commerce Commission has considered its obligations in regulation within the provisions of the declaration of national transportation. In *Commodities, California to Arizona and New Mexico*, Division 2 of the Commission directed attention to the fact that the commission was directed by Congress to so administer the Interstate Commerce Act as "to preserve the inherent advantage of each mode of transportation and to encourage the establishment and maintenance of reasonable charges for transportation services, without unjust discriminations and undue preferences or advantages, or unfair or destructive practices."<sup>6</sup>

In an earlier case decided at a time when the declaration of the policy of the Congress as stated by the Transportation Act, 1920, the commission held that it would defeat the intention of the Congress as expressed in the declaration of policy to foster transportation by water and by rail, if the railroads, "with their almost limitless resources" were permitted to operate and to fix rates so as to deprive the water carriers "of traffic which the latter would naturally handle."<sup>7</sup>

<sup>5</sup> Interstate Commerce Act, National Transportation Policy, added to the Act by the Wheeler-Lea Transportation Act, 1940 (54 Stat. L. 890), September 18, 1940; see also Sec. 500, Transportation Act, 1920, (41 Stat. L. 499), February 28, 1920.

<sup>6</sup> (245 I.C.C. 545, 559-560), 1944.

<sup>7</sup> Transcontinental Cases of 1922, (74 I.C.C. 48), 1922.

The commission, at the time this case was decided, was governed by the declaration of policy of the Congress expressed in the Transportation Act, 1920, which provided that it was the policy of Congress "to promote, encourage, and develop water transportation service, and facilities in connection with the commerce of the United States, and to foster and preserve in full vigor both rail and water transportation."<sup>8</sup>

STANDARDS OF MINIMUM RATE REASONABLENESS. An examination of the decisions of the Interstate Commerce Commission lead to the conclusion that although the provisions of the Interstate Commerce Act and the declaration of National Transportation Policy by Congress point toward standards which should govern the commission in determining minimum reasonable rates, the real criteria are the same as those used generally by the commission in fixing reasonable rates.

The commission is specifically directed by Section 4 of Part I of the Interstate Commerce Act to require the carriers to establish reasonable compensatory rates in cases where the commission permits departures from the long and short haul clause of the Fourth Section. This proviso of Section 4 provides:

"Upon application to the commission such common carrier may in special cases, after investigation, be authorized by the commission to charge less for longer than for shorter distances for the transportation of persons or property; and the commission may from time to time prescribe the extent to which such designated common carrier may be relieved from the operation of this Section, but in exercising the authority conferred upon it in this proviso the commis-

<sup>8</sup> Transportation Act, 1920 (41 Stat. L. 499), 1920, Sec. 500.

sion shall not permit the establishment of any charge to or from the more distant point which is not reasonably compensatory for the service performed . . ."<sup>9</sup>

This same admonition does not appear in Sections 13 or 15 of the Interstate Commerce Act.

There appears to be a close relationship between the commission's statutory power to prescribe minimum reasonable rates and the provisions of the rule of rate making contained in each of the four Parts of the Act.<sup>10</sup>

In *Molasses from New Orleans, La. to Peoria and Pekin, Ill.*, the so-called *Black Strap Molasses Trainload-Lot Case*, the commission found a proposed rate of 14c. per 100lb., minimum weight 1,800 tons per shipment, or about 38 tank carloads, to be unreasonably low although the cost study showed that the 14c. rate was in excess of estimated fully allocated costs. The proposed rate was found unlawful because it was lower than was necessary to meet competition by water.<sup>11</sup> The commission ordered the cancellation of the proposed tariff naming the rate of 14c. per 100lb. without prejudice to the establishment of a rate of 15c. per 100lb. which was found not to be lower than necessary to meet the competitive barge costs which roughly approximated 15.72c. per 100lb.

PRESERVATION OF RATE RELATIONSHIPS. The commission has exercised its statutory authority to order the establishment of minimum rates in order to maintain rate relationships without apparent consideration of minimum earnings of the carriers or the cost of performing the service. The carrier's cost of service was not considered controlling in prescribing minimum rates where a proper showing was made that the integrity of a rate group was jeopardized. The commission used its power to prescribe minimum rates without regard to the carrier's cost in *Coal Rates from West Virginia*

<sup>9</sup> Interstate Commerce Act, Part I, Section 4 (1).

<sup>10</sup> Ibid., Part I, Section 15-A; Part II, Section 216 (1); Part III, Section 307 (1); and Part IV, Section 406 (d).

<sup>11</sup> (235 I.C.C. 485), 1939.

to Northeastern Ohio.<sup>12</sup> In this case the commission found justified proposed reduced rates on coal from points on the lines of the Baltimore and Ohio Railroad and Pittsburgh and West Virginia Railway in the extreme western part of the Pittsburgh coal rate group in western Pennsylvania and northwestern West Virginia to Cleveland, Akron and intermediate points, despite protests of other carriers and coal producers in other groups. The commission took the view that this cargo was one involving a minor readjustment of rates involving a rate group boundary which would not precipitate a general readjustment of rates in the territory, and that the rates appeared to be compensatory and necessary to preserve the integrity of the rate group. The commission observed, in part:

"It is not our province to require the carriers to adopt something merely because it looks well on paper or meets our own views. Our duty is merely to regulate." To our minds, the proposed rates would not put the rate structure in danger or do competitors in the Moundsville or Avella districts any real injury and, since they appear compensatory and the evidence of undue prejudice lacks weight, no grounds appear for refusing to allow them to become effective. If other reductions follow, they can be dealt with upon their merits. Under our minimum rate powers we can, upon proper showing, preserve the Pittsburgh group whenever its integrity is threatened. We find that the proposed rates have been justified."<sup>13</sup>

The commission prescribed minimum reasonable rates without considering the carriers' costs in another case in order to preserve rate relationships between territories and between commodities, in this instance rates on dry goods, cotton piece goods, and unfinished cotton piece goods and yarn. The rates in question were those applicable between points in Official,

<sup>12</sup> (220 I.C.C. 333), 1937.

<sup>13</sup> (220 I.C.C. 333, 334), 1937.



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Southern, Western Trunk Line and Southwestern Territories and interterritorial rates between points in these respective territories. In the original proceeding related maximum rates were prescribed, and upon further consideration in a subsequent proceeding, the commission modified its original orders in order to preserve rate relationships between points adjacent to the borders. In its order upon further consideration, the commission directed the carriers to establish minimum rates to preserve these relationships.<sup>14</sup>

The commission found in I. and S. Docket No. 4589, that proposed reduced rates on cotton piece goods in any quantity lot shipments from points in North and South Carolina and points in Virginia and Georgia to Nashville and other points in Tennessee and Kentucky by rail and by motor were not justified because they were so low as not to be shown to be compensatory and therefore not justified.<sup>15</sup> The commission stated in part, in its opinion:

"Respondents claim that the proposed . . . rate is compensatory. Their principal support for this contention is a comparison of the proposed any-quantity rate with less-than-carload rates on numerous commodities for similar distances prescribed or approved by the commission . . . The values of the articles are not shown . . . Respondents show that the proposed 63-c. rate would yield 21.7 mills per ton-mile for the distance of 58 miles . . . We do not know what special significance can be attached to such a figure as a criterion of the reasonableness of an any-quantity rate. Car-mile earnings would be illuminating if we had specific data as to the unit quantities in which these materials reached Nashville . . ."<sup>16</sup>

It found that the maximum rates it had prescribed which were prescribed after exhaustive investigation were not too high and that, therefore, the lower rates proposed must be unreasonably low.

"To approve as low a basis as is asked for by respondents would assign to these articles less than the share of the transportation burden which they fairly should assume . . . Furthermore, we doubt whether the facts of record sustain respondents' position that a rate as low as 63 cents is necessary in order to retain or to recover a substantial portion of the traffic . . . We conclude that an any-quantity rate lower than 59 cents would be unreasonably low and that it would be less than compensatory when we take into consideration the service rendered."<sup>17</sup>

**REMOVAL OF INTERSTATE-INTRA-STATE DISCRIMINATION.** The Interstate Commerce Commission has used its power to prescribe minimum reasonable rates to remove unjust and unreasonable discrimination between interstate and intrastate rates. In considering the problems raised by conflicting interstate and intrastate rates, the commission has compared the rates in these territories with each other and with the rates in the same or adjacent territories. Little attention appears to have been given to the compensatory character of the intrastate rates alleged to discriminate unjustly against and prejudice interstate commerce. These cases have arisen under the powers conferred upon and the duty placed upon the commission by the Interstate Commerce Act as amended to remove such unjust discrimination.<sup>18</sup>

In one case of this type which was ultimately decided by the United States Supreme Court, the Court overruled the commission's order. In doing so the Court did not deny the commission's statutory power and duty to remove

unjust discrimination between interstate and intrastate rates, nor did it hold that the commission must find, as a condition precedent to issuing such orders, that the lower intrastate rates were less than reasonable. Its decision was based upon the ground that the order of the commission was not supported adequately by evidence and upon that ground alone.<sup>19</sup>

In this case, known generally as the *North Carolina Fare Case*, the I. C. C. had issued, under Section 13 (4) of the Interstate Commerce Act, an order authorizing railroads in North Carolina to establish and maintain intrastate passenger coach fares at levels not lower than prevailing interstate fares. The effect of the order was to increase the state-prescribed basic coach fare of 1.65 c. per passenger mile to the prevailing interstate coach fare level of 2.2 c. per passenger mile. The Supreme Court held that the order of the commission was not based on adequate findings based on evidence.

The Supreme Court stated in its decision in this case that the commission is empowered to nullify state prescribed intrastate rates only when, after full hearing, it finds that such rates cause, either "undue or unreasonable advantage, preference or prejudice between persons or localities in intrastate on the one hand and interstate commerce on the other hand, or undue, unreasonable or unjust discrimination against interstate commerce."<sup>20</sup>

The commission was held by the Supreme Court to be without authority to set aside such state-prescribed intrastate rates unless there are "clear findings, supported by evidence, of each element essential to its exercise of that power."

The power of the commission to require a state to raise intrastate rates depends upon whether the intrastate traffic is "contributing its full share of the earnings required to meet maintenance and operating costs and to yield a fair return on the value of the property directed to the transportation

<sup>14</sup> I. and S. Docket No. 3636, Cotton, Woolen and Knitting Factory Products, (211 I.C.C. 692), 1935; and (220 I.C.C. 189), 1937.

<sup>15</sup> Cotton Piece Goods in the South, (234 I.C.C. 325), 1939.

<sup>16</sup> Ibid. at pp. 531-32.

<sup>17</sup> Ibid. at pp. 532-533.

<sup>18</sup> Interstate Commerce Act, Part I, Section 13 (4).

<sup>19</sup> *North Carolina et al. v. United States et al.*, (325 U. S. 507), 1945.

<sup>20</sup> Ibid. pp. 510-511.

service both interstate and intrastate." 21

Without such findings supported by evidence the commission was held to have exceeded its authority and its order was unauthorized and the District Court should have declined to enforce it.

The power and duty of the Interstate Commerce Commission generally to remove unduly preferential and prejudicial relationships of rates between interstate and intrastate commerce after full and fair hearings has been abundantly supported by decisions of the United States Supreme Court.<sup>22</sup>

In another case, *Youngstown Sheet and Tube Co., et al. v. United States, et al.*, the Supreme Court held that rate comparisons of existing rates in the same or other territories although not conclusive tests of the reasonableness of the rates under investigation have probative value when buttressed by other evidence respecting the nature of the service and costs of performing the service.<sup>23</sup> In this case, the commission fixed minimum reasonable rates on ex-river coal from trans-shipment points on the Ohio River, including Colona and Conway, Pa., to destinations in Ohio, including Canton, Massillon, Cleveland, Lorain and South Lorain, Ohio. It found that the minimum rates fixed were reasonable and that rates on a lower basis would create unlawful discrimination against shippers in origin groups who could not use the water-rail routes.

It found that rates lower than those prescribed would destroy the proper differential relationships between the various coal producing districts with respect to shipments from these respective originating groups to the Ohio destinations. The commission ordered the fixing of minimum rates on ex-river coal from Colona and Conway to Youngstown at not less than 90 c. per ton; and from lower Ohio River shipping points of \$1.20 per ton to Massillon and Canton, and of not less than \$1.45 per ton to Cleveland, Lorain and South Lorain.<sup>24</sup>

In another proceeding, the commission instituted on its own motion an investigation of the reasonableness and lawfulness under Section 13 of the Interstate Commerce Act of interstate coal rates from the Pittsburgh and Connellsville districts to northeastern Ohio points and of the lower intrastate rates on coal permitted and authorized by the Ohio Public Utility Commission. In this case, the commission found that the interstate coal rates were reasonable and justified, and that the Ohio intrastate rates resulted in undue prejudice against persons and localities outside the state, and in unjust discrimination against interstate commerce. The restoration of the previously existing intrastate rates as minimum rates was prescribed to remove the undue prejudice and unjust discrimination.<sup>25</sup> This order

(Continued on Page 79)

<sup>21</sup> I. and S. Docket No. 3283, Coal, Bituminous, Ex-River, from Colona and Conway, Pa. to Youngstown, Ohio. (197 I.C.C. 617), 1933, modifying the Commission's findings in (163 I.C.C. 3), 1930, and (185 I.C.C. 211), 1932.

<sup>22</sup> Intrastate Rates on Bituminous Coal Within Ohio, (192 I.C.C. 413), 1933.

<sup>23</sup> Ibid. p. 520.

<sup>24</sup> Florida et al. v. U. S. et al., (282 U. S. 194), 1931; U. S. et al. v. Louisiana et al. (290 U. S. 70), 1933; and Florida et al. v. U. S. et al., (282 U. S. 194), 1931.

<sup>25</sup> (295 U. S. 476), 1935.



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## MULTIWALL BAGS

(Continued from Page 25)

reduced at least 50 percent. In some instances the reduction was as high as 70 percent. Space utilization was improved to a marked degree. Filled multiwall bags required 15 to 20 percent less space than the older packaging method.

Plant workers and customers quickly and enthusiastically accepted the new 50 lb. containers as easier and cleaner to handle. Dust generated in the packaging operation had been reduced considerably.

**Grains.** On a farm in the famous San Joaquin Valley, the grain growers were faced with an increasing shortage of fabric sacks for storing barley and wheat. The war had reduced the import of burlap and the lumber shortage discouraged the change to storage in wooden bins.

The farmers frowned on the possibility of using paper bags, but by the end of the first year trial they were smiling, as their storage problem had been solved with multiwall bags. One farmer harvesting 1,800 acres of Atlas barley packed 4.5 million lb. in paper bags. These bags cost him 8½¢. compared to 24¢. for jute. The savings was roughly five dollars an acre or around ten thousand dollars for the 1,800 acres.

Packaging grain in the field differs from packaging in industrial plants. Upon turning to paper bags, this particular farmer encountered what at first seemed a disadvantage in that it was of course not practicable to install a complete bag filling unit on each harvester. So expediency required the building of a special trailer consisting of a large wooden tank on a rubber tired chassis to travel alongside each harvester and carry the barley in bulk to the edge of the field to be sacked. With three filling spouts for multiwall bags on the side of the grain tank, a simple gravity packing operation resulted.

Unexpectedly this procedure offered compensating advantages. In the first place it eliminated the need of hiring bag sewers on the harvesting machines, which had always been a special headache. Secondly, the bags, after being filled, could be stacked on the spot rather than scattered all over the farm, thus avoiding the costly and arduous task of picking them up and loading them on wagons or trucks.

In the harvesting seasons of 1944-45, unprecedented rains swept the San Joaquin Valley, and with a scarcity of trucks and drivers, grain stacked in paper bags was not moved from the harvesting scene until late November. Dur-

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### New Truck Association

The National Truck Body Manufacturers' Assn., representing over 150 firms of commercial truck body makers, was organized recently and received its charter from the state of Indiana. The association is the first one in the field, which is a quarter billion dollar industry, and the only one of its size not to have a trade association up to this time. Purposes of the new organization are to develop practices and methods designed to aid the truck body building industry, to determine and properly publicize the material needs of the industry, to conduct studies and surveys of conditions affecting the industry, to bring to the attention of members various matters of mutual interest, and to promote economies and other aids which will be of benefit to members.

Officers for the remainder of the calendar year are as follows: Frank E. Hartness, Transportation Specialties, Elkhart, president; R. W. Allen, California Body and Trailer Co., Redwood City, vice president, western district; E. E. Miller, DeKalb Commercial Body Corp., DeKalb, Ill., vice president, midwest district; Fred S. Glasier, Glasier Body Corp., Newark, vice president, eastern district; R. R. King, American Body and Trailer, Inc., Oklahoma City, secretary-treasurer; Shipley D. Burton, 1016 Du Pont Circle Bldg., Washington, D. C., permanent secretary manager.

---

ing this long storage period in the wide open spaces without protection, the grain contained in the bags was kept in perfect condition. Had the grain been packaged in burlap bags, the farmers estimated, at least one-third would have spoiled.

**Salt.** A final illustration of the use of multiwall bags proves their worth in packaging salt. Ten years ago a prominent salt concern began studying the possible advantages of the paper bag as a cleaner, more economical container for its industrial shipments. Numerous tests were made to establish the merits of paper versus fabric.

Further tests were made concerning the prevention of caking. Salt thirsts for moisture and snatches it at every opportunity along the line from the refinery to the ultimate user. Atmospheric moisture penetrated the fabric container so readily that storage in that form was practically impossible. Tests demonstrated that the salt could be packed and stored in specially constructed moisture-proof ply multiwall bags.

The one-trip paper bag, it was soon discovered, eliminated the hazard of dirt, dust, and liquids getting into the salt while in transit or while stored in the customers warehouse. Weight was more constant too, since seepage through the material was eliminated.

After careful consideration of the merits of both paper and fabric containers, the management turned to the multiwall bag. Besides full delivery weight and product protection an overall packaging savings of 45 percent resulted.

The above examples of the packaging problems faced by various industries, and how they were solved, indicate rather clearly the tremendous opportunities many concerns have had and still have in shaving costs and making their operations more efficient. Each year sees many new fields opening to the prospects of lower cost and more efficient operation through the use of multiwall paper bags.



## PACKAGING'S GRAY MARKET

(Continued from Page 27)

and becomes the knight-errant concerned only with the wish that his company incur no loss or as little loss as possible on the rejected car. Later, the same distributor is plagued with goods from the rejected car flooding his market at demoralizing prices. The gray market became the ultimate receiver of the unwanted goods (possibly damaged in appearance only), and these are foisted on an unsuspecting public. Had the sales and transportation divisions coordinated their efforts in handling the original claim, a disorganized market might have been avoided.

Many may ask, "How can traders in distressed goods be avoided; do they not in fact serve a useful purpose?" To entirely eliminate them may be too much to aspire for. There are, however, practical ways of reducing the extent of their activity. After all, it is the concern of every individual shipper to safeguard his goods through to destination. It is well to know that one has insurance or that public carriers are liable for damage resulting from proven negligence or mishap. But the price that is paid in handling a claim—annoyed customers, disrupted routine, diversion of administrative pursuits, tied-up funds and ultimately, lost control of one's off-standard goods, floating around in a gray market is too great a price to pay.

The simplest way to handle damaged freight is to prevent it. These ways to prevent it might be suggested:

1. Pack with a margin of safety. Expect every shipping unit to receive rough handling. Test your standard containers with impacts, reasonable drops, excessive tiering, scuffing, crushing and shaking. If you can create damage, specify a stronger shipping unit. Make sure closures and strapping are ample.

2. Analyze the interior packing, cushioning, wrap-

ping or dividers. Does the interior furnish a rigid, firm mass so that no amount of vibration, transportation shock and handling will permit contents to harm themselves from within?

3. Investigate what happens to your completed unit when beset by any of the elements. Will moisture weaken the shipping unit beyond a point of safety? Will humidity and changes of temperature cause internal sweating, rust and deterioration? If in water shipment, have you packed to anticipate a little salt spray? Will cold or freezing create damage? If necessary, engage a corrosion-control expert to report on any inherent weaknesses in your pack.

4. Carload shippers should prepare their cars and shore and brace with a view to the possibility of the car receiving some jolts en route. That is the nature of rail freight. Perhaps a car is bumped too hard and the load tears loose, resulting in damage. Better the chocking and bracing a little stronger than the questionable satisfaction of settling a claim.

5. Test stencil ink and marking materials for waterproofing and rubbing qualities. Address small express, parcel post, air, trucking and L.c.l., shipments with care. Make sure there is always a packing slip inside showing both shipper and consignee. The best outside markings can through external causes become obliterated.

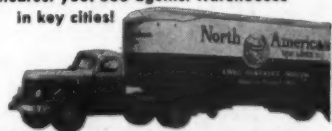
6. Finally—and this is most important—know your carriers, your warehouses and terminals *en route*. The failure of a shipping container further along the line may be attributed to the rough handling and abuse of a careless terminal operation still existing with a few less dependable carriers.



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## UNIT LOAD MOTOR SHIPMENTS

(Continued from Page 21)

From the viewpoint of the shipper, it is apparent of course that he often will not have shipments of sufficient volume to justify fork lift handling; or he will not have either a warehousing or shipping platform setup to make palletized handling possible. Also, some of the common shipping practices work against palletized handling. For instance, the shipper usually will have his shipment either already set out at the edge of the platform where the truck-trailer will be parked for loading, or will have it ready for delivery to this spot. Thus, if the shipper does have fork lift equipment to use in spotting this shipment, with only a few extra yards of travel he could place the load at the most convenient stowage space within the trailer.

But assuming that the shipper should choose to have his goods for shipment fully palletized, on a type and size of pallet adapted to good stowing by the trucker, there would result distinct handling advantages to both shipper and trucker. The palletized unit, probably containing many separate packages, could be checked in as a single item. The separate packages thus would be much less subject to shipping damage or losses from handling or pilferage. Also, the turn-around time of the trucker—and the time use of the docking space—would be greatly cut, possibly from 2½ hours down to 20 minutes.

However, assuming that the unit package was based on a pallet intended to go along to destination, the shipper possibly would be faced with two separate penalties. First, he would have to pay the same shipping tariff rate for the weight of the pallet that he would be taxed for the goods being shipped. Also, if the palletized unit should by chance contain more than one different class of goods, the total rate would be based on the one type of goods that was in the highest tariff

bracket. Second, the shipper also would face the problem of how to get back his empty pallet, unless the pallet should happen to be of the cheap expendable type.

From the viewpoint of the shipper, doubtless one of the greatest incentives that could come to encourage him to palletize his shipments would be such modifications in rail and trucking tariffs as to permit the crediting of a part or all of the weight of his base pallets as "dunnage," and also like rate discounts which would assist him in getting his empty pallets returned to their shipping source.

Any use of pallets in shipping of course also involves the general problem as to what is proper "protective packaging." This is made important because of the penalties now effective if a palletized truck or rail shipment should be adjudged not protectively packaged. The present allowable penalty is a 20 percent increase on a truck LTL or a rail LCL shipment; or a 10 percent penalty increase on a full truck or full car shipment.

Some railroad officials have been frank to admit that the national trend toward increasing palletization soon may make important changes in transportation methods. For instance, the statement of J. W. Cockrill, District Storekeeper for the Illinois Central Railroad, made in Chicago at the time of the 1947 Annual Industrial Packaging and Materials Handling Forum:

"Palletization is in its infancy, so to speak, and destined to play an important part in the transportation and movement of commodities. Our orders carry a notation requesting shipment on pallets, where consistent, and manufacturers are beginning to cooperate; a number of items are now being shipped on pallets. Already we are realizing savings in the unloading of cars containing such items—these cars being released on an average of one hour with the fork truck and operator, whereas the manual method would require ap-

proximately sixteen man hours to unload the car. Very conservative estimates of saving in loading and unloading have been placed at 50 percent. The potential injury hazard to employes is reduced through palletization, since there is less manual handling of the individual packages. In fact, we feel that, as of now, the fork truck and pallet is an unbeatable time, labor- and space-saving combination.

"I am told," he continued, "that the Division of Simplified Practice of the Bureau of Standards is urging palletization on a national scale. This would lead us to believe that those that may not be aggressive enough to do any of the pioneering in this field will eventually have the movement of commodities on pallets forced upon them."

This quote from a railroad spokesman does not imply what might be the attitude of his own road, and in general the attitude of the railroads and motor trucking industry and government rate supervising agencies, toward the supplementary "hot question" as to whether there may be developed special rail and truck tariff discount inducements for the use of pallets in shipping, and the return of empty pallets to their shipping source.

There seems general agreement that the use of pallet and fork lift on the shipping dock is an "unbeatable combination." But from the viewpoint of the shipper who is considering the palletization of his shipments, we must ask this further question: "Will all the savings which palletization will make possible in handling and shipping safety be absorbed—or more than absorbed—by the extra expense of the original cost of the pallets, and the added tariff costs from shipping the pallets with the goods and then getting the empty pallets back?"

Apparently some of the largest Chicago shippers have developed an answer favorable to palletization; for example, the large increases in palletized shipping by Kraft and International Harvester.

## REASONABLE RATES

(Continued from Page 75)

of the I. C. C. was sustained by the U. S. District Court, after preliminary injunctions had been issued, and by the United States Supreme Court.<sup>26</sup> In the *Youngstown Case*, the Court stated in part:

"In the first place the Commission here found the required minimum [rate] reasonable; in the second place, it had after full investigation in this and the *Ohio Case*, held the existing rate struc-

ture built upon certain key or controlling rates by application of proper differentials—just and reasonable, and the ex-river rates here in issue, in contrast, too low . . . The order of the Commission was based primarily upon the reasonableness of the minimum [rates] prescribed. The existing rate structure furnished support for the finding of reasonableness.<sup>27</sup>

<sup>26</sup> *Ohio et al. v. United States et al.*, (6 Fed. Supp. 386), 1934; and (292 U. S. 496), 1934.

<sup>27</sup> *Youngstown Sheet and Tube Co. et al. v. U. S. et al.*, (295 U. S. 476, 480), 1935.

## Coming Events

- Sept. 20-23—New York State Warehousemen's Assn. 27th Annual Convention, Saranac Inn, Saranac, New York.
- Sept. 28-Oct. 1—Iron and Steel Exposition and Convention, sponsored by Assn. of Iron and Steel Engineers, Cleveland Auditorium, Cleveland, Ohio.
- Sept. 27-Oct. 1—Third National Plastics Exposition, The Society of The Plastics Industry, Inc., not open to general public, Grand Central Palace, New York City.
- Oct. 5-7—Third Annual Packaging and Materials Handling Exposition, Industrial Packaging Engineers Assn., Hotel Sherman, Chicago.
- Oct. 5-7—New England Materials Handling Exposition, Mechanics Hall, Boston.
- Oct. 6-9—National Aeronautical & Aircraft Display, Society of Automotive Engineers, Hotel Biltmore, Los Angeles, Cal.

- Oct. 8-13—Annual Convention, American Trucking Assn., Washington, D. C.
- Oct. 14-16—Annual Convention, Southwest Warehousemen's & Transfermen's Assn., Skirvin Hotel, Oklahoma City, Okla.
- Oct. 19-24—Second annual Kansas Manufacturers Show in Wichita, Kansas.
- Jan. 1-14, 1949—Annual & Engineering Display, Society of Automotive Engineers, Book-Cadillac Hotel, Detroit, Mich.
- Jan. 23-28—Annual Convention, National Furniture Warehousemen's Assn., Palm Beach Biltmore Hotel, Palm Beach, Fla.
- Feb. 7-10—58th Annual Convention, American Warehousemen's Assn., Fairmount Hotel, San Francisco.  
(Joint meeting of both divisions: National Assn. of Refrigerated Warehouses and AWA Merchandise Div.)

## Books and Catalogs

GLUE ROOM SPECIALTIES, revised booklet, contains up-to-the minute information on products designed to improve glue room efficiency and describes various glue room items of interest to woodworkers, furniture manufacturers, and all others who use glue and allied products. Perkins Glue Co., Cannon Ave., Lansdale, Pa.

PRACTICAL HANDBOOK OF INDUSTRIAL TRAFFIC MANAGEMENT, A Modern Industry Book, by Richard C. Colton, general traffic manager, RCA Victor Div., Radio Corp. of America, 476-p., \$6. Tentative publication date: Oct., 1948. A practical overall picture of the art of shipping materials economically. The basic purpose of this book is to give the student, business man and the practicing traffic man a better understanding of the broad scope of industrial traffic management, what it can be expected to contribute to a business as well as suggestions as to how these contributions may be accomplished. To management it gives quick but complete overall understanding of their traffic department responsibilities. Funk & Wagnalls Co., 153 E. 24 St., New York.

A supplementary SCHEDULE OF TRADE AND INDUSTRIAL FAIRS to be held

throughout the world during the second half of 1948 has been compiled and issued by World's Business & Guide, the export business publications, 440 Fourth Ave., New York City 16.

THE BOSTON STORY—AN OLD CITY WITH NEW OPPORTUNITIES, 28-p. illus. booklet about Metropolitan Boston, which contains much data concerning marketing opportunities and other economic and community information about this area. Boston Chamber of Commerce, 80 Federal St., Boston 10, Mass.

THE G. B. CONTAINER ALBUM, 12-p. illus. booklet illustrating several types of shipping containers designed by General Box Co. packaging engineers. Snapshots of better packaging showing many items as they are actually being packed are featured. General Box Co., 500 N. Dearborn St., Chicago 10, Ill.

WHEEL-EZY HAND TRUCK WITH ZERO PRESSURE TIRES, bulletin, illustrating the use of the handy Wheel-Ezy and listing specifications and prices of four models. The Rapids-Standard Co., Inc., Dept. Z-203, 342 Rapistan Bldg., Grand Rapids 2, Mich.

# 3

## THIRD ANNUAL INDUSTRIAL PACKAGING and MATERIALS HANDLING EXPOSITION & FORUM



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# Getting down to Cases

By LEO T. PARKER  
Legal Consultant

## TRANSPORTATION

### Things You Can Do

YOU CAN sue and force a shipper to pay the difference between the contract rate and a scheduled rate. In *Heuer Truck Lines v. Brownlee*, 31 N. W. (2d) 375, Iowa, it was shown that a company transported bottled beverage from a bottling plant to a warehouse, and returned empty cases. Although the transporting was done under a special contract, the higher court held that the trucking company was a common carrier and the Commerce Commission had jurisdiction to regulate the rates charged by the carrier. Also, this court held that the carrier could sue and recover from the bottling company the difference between the rate paid by the shipper under the special contract and the scheduled rate.

YOU CAN prevent a union from interfering with your transporting merchandise. In *Northwestern v. Lumber & Sawmill Workers*, 189 Pac. (2d) 277, Calif., it was shown that a common carrier is under legal duty to accept freight for transportation from all shippers and to refrain from discrimination in the service rendered. The court held that a union can be enjoined from any interference resulting in a labor dispute with a shipper or other third party.

### Things You Can't Do

YOU CAN'T avoid paying compensation to a truck driver who was injured or killed while another employee was driving the truck. In *Kocher v. Creston Transfer Co.*, 166 Fed. (2d) 680, it was shown that a truck driver named Kocher was killed while he was asleep. A collision occurred while a fellow employee was driving the truck. The lower court held Kocher's dependents not entitled to compensation, but the higher court reversed the verdict, saying: "The test is who was in charge of the actual operation of the vehicle at the time of the accident."

## PACKAGING

### Things You Can Do

YOU CAN refuse to pay freight rates applicable to ordinary containers if your containers have no balls. In *Interstate Dispatch, Inc. v. French-Bauer, Inc.*, 166 Fed. Rep. (2d) 82, it was shown that shipments of flavoring syrup were made in steel milk shipping cans of ten-gallon capacity without balls. The higher court held that the carrier must collect freight rates applicable to "barrels" and not the higher rates applicable to ordinary containers.

### Things You Can't Do

YOU CAN'T change the time limit fixed by a statute for suing to recover

freight charges. In *Arkansas Oak Flooring Co. v. Louisiana & Arkansas Ry. Co.*, 166 Fed. (2d) 98, the higher court clearly held that neither an interstate, shipper nor the Interstate Commerce Commission may extend the legal period within which to sue for the difference between a low transit rate paid and a local rate actually due.

YOU CAN'T stop a competitor from using a trade-mark not confusing to the public. In *Gaby, Inc. v. Irene Blake Cosmetics, Inc.*, 166 Fed. (2d) 164, a manufacturer applied for registration of the trade-mark "Gabardine" in the United States Patent Office. It is used on shave powder, shave lotion and hair dressing. The Court of Customs and Patent Appeals held that registration would not be denied although the trade-mark "Gaby" has for many years been used on a large variety of cosmetics, some of which were of same descriptive properties. This court said: "'Gaby' and 'Gabardine' begin with the same three letters, but not with the same syllable . . . I am convinced, that the two differ sufficiently in appearance, sound and significance to be used concurrently in trade without any reasonable likelihood of confusion."

For comparison, see *Morton Manufacturing Co. v. Delland Corp.*, 166 Fed. (2d) 191. In this late case the higher court held that manufacturers and sellers of skin preparation called "Chap Stick" were not entitled to exclusive use of the word "Stick" in the trade-mark, since this word is merely descriptive of the shape or form of the product. Hence, the court decided that a manufacturer of similar merchandise could register and use the trade-mark "Slick Stick," saying: "The question presented is whether 'Slick Stick' is confusingly similar to the trade-mark 'Chap Stick.' We are of opinion that the concurrent use by the parties of their marks on their respective goods would not be likely to cause confusion in trade or deceive purchasers."

## WAREHOUSING

### Things You Can Do

YOU CAN avoid paying compensation or damages to a warehouse employee injured in his own automobile on a public highway while coming to or going from his regular work. For example, in *Hinton v. North Georgia Warehouse Corp.*, 45 S. E. (2d) 591, S. C., an employee of the North Georgia Warehouse Corp. sued for compensation for an injury received when his own automobile collided with another car as he was turning from the main highway into a parking lot furnished by the warehouse company for use of its employees. The lower court awarded compensation to the employee, but the

higher court reversed the verdict since the testimony showed that the employee drove his own automobile to work, furnished the necessary gas and oil to operate same, and no means of transportation was furnished him by the warehouse company.

YOU CAN prevent an owner of stolen or destroyed stored goods from receiving payment greater than the actual value of the goods. For example, in *Federal Ins. Co. v. Engelhorn*, 57 Atl. (2d) 478, N. J., it was shown that an insurance company insured certain chattels. Afterwards the owner placed them in a warehouse from which they were stolen. The owner made a claim against the insurance company on the policy and was paid the full amount. A week later, the storage company paid the owner of the chattels \$1,500. The insurance company sued the owner of the chattels to recover \$1,500. The higher court ordered him to pay this amount to the insurance company.

### Things You Can't Do

YOU CAN'T avoid liability to the holder of warehouse receipts for loss of stored goods caused by your negligence. For example, in *English Co. v. Reed*, 207 S. W. (2d) 959, Texas, it was shown that one Reed loaned money to one Sealy, the owner of goods stored in a warehouse. Reed took as security the warehouse receipts signed by the warehouse company's employee. Later the goods were missing and Reed sued the warehouse company to recover the value of the missing merchandise. The higher court held in favor of Reed, saying: "Unless appellant (warehouse company) can account for its failure to deliver in a satisfactory manner, then it is liable for conversion of such goods to either Reed or Sealy."

## MARKETING

### Things You Can Do

YOU CAN adopt and use a trade-mark similar to another mark used on merchandise in a different classification. In *Daggett & Ramsdell v. Samuel*, 166 Fed. (2d) 151, a manufacturer applied to the United States Patent Office for the registration of the trade-mark "Harol" on a hair conditioner. The lower court refused to grant the registration because another company had many years previously registered a similar trade-mark for use on a preparation for "relief of headache, neuralgia, and similar pains." The higher court ordered the commissioner to grant the registration, and said: "We are of opinion that the goods of the parties do not possess the same descriptive properties."

# People in Distribution

For our readers' convenience, items referring to one person only are arranged alphabetically according to the individuals' names. Company names or changes affecting more than one individual are arranged alphabetically by company names. Association items are similarly arranged.

**George F. Alderdice, Jr.**, has been named director of plant transportation, traffic department, Carnegie-Illinois Steel Corp. (Kline).

**W. C. Baker** of the Produce Terminal Cold Storage Co. of Chicago, has been elected to the Chicago Mercantile Exchange.

**William V. Blake** has resigned as superintendent of rates for the Ohio Public Utilities Commission in Columbus to join the Lustron Corp., Columbus, O. (Kline).

**E. P. Carr**, Howell Warehouses, Ltd., Toronto, was re-elected chairman of the Merchandise Div. of the Canadian Warehousemen's Assn.

**H. C. Diehl**, director of the Refrigeration Research Foundation has been elected president of the Institute of Food Technologists, a professional and scientific organization composed of over 3,000 individuals engaged in the field of food research and development, and food manufacturing.

**J. J. Finegan** has become assistant to the president of the Texas & Pacific Railway.

**R. T. Hazell** has been promoted to the post of general manager, The Fruehauf Trailer Co. of Canada, Ltd.

**Walter C. Hemmingway**, former vice president and general manager of the Federal Shipbuilding and Dry Dock Co. at Kearny, N. J., has assumed his new post as president of the Pittsburgh Steamship Co., Cleveland, subsidiary of U. S. Steel Corp. He replaces the late A. H. Ferbert. (Kline).

**William G. Henry** has been named assistant director of public relations for Capital Airlines.

**Clem D. Johnston**, general vice president of the American Warehousemen's Assn., has been in Washington as Deputy Director of Civilian Defense under Secretary Forrester.

**D. E. Lally** has been appointed assistant general sales manager, The Elastic Stop Nut Corp. of America, Union, N. J.

**Benjamin F. McClancy** has been appointed general manager of The Associated Industries, Cleveland.

**Kent S. McKinley** of Buffalo was elected president and general manager of Marcy-Buck & Schuyler, Inc., Watertown, N. Y. He formerly was executive vice president of the company. (Toles).

**Harry D. Rhodehouse**, general traffic manager of Republic Steel Corp., has been elected president of the Traffic Club of Cleveland. (Kline).

**Harry L. Scheer**, assistant traffic manager for the Globe-Wernicke Co., Cincinnati, since 1944, has been promoted to traffic manager. (Kline).

**Bob E. Sells**, former air corps major has been named district traffic manager of Braniff International Airways in Tulsa.

**C. W. Webster** has been elected executive vice president and manager of Peruvian International Airways.

**Parke Wright, III**, has been appointed district manager for National Airlines at Washington, D. C.

• • •

**Aerol Co., Inc.** has appointed **Hampton Robb** as executive vice president and **Albert J. Freitag** as treasurer.

**American Airlines** has elected **William J. Hogan** a vice president. Mr. Hogan, who has been treasurer of the company, will continue in that office. **John G. Zevely**, general attorney, has been elected as assistant vice president.

**Crooks Terminal Warehouses, Inc.**, has elected the following new officers: **Alfred J. Crooks**, executive vice president, **Thomas A. Crooks**, vice president, and **R. Frank Wallace**, vice president.

**Dravo Corp.** has elected **Edward M. Borger** as a director. He was president of The Peoples Natural Gas Co., and succeeds **S. G. Cooper**, retired.

**Eastern Air Lines, Inc.** has appointed **Charles A. Glover**, former assistant traffic and sales manager in Atlanta, as traffic and sales manager for the company in the St. Louis area. **Thomas A. Sheehan**, formerly traffic and sales manager in Hartford, Conn., has been appointed traffic and sales manager for the company in Richmond.

**Fay Traffic and Service Corp.**, Washington, D. C., has been established for general traffic representation. **Edward A. J. Fay** is president and **Eugene S. Ostheimer** is vice president.

**Food Machinery Corp.** has announced the resignation of **Ogden S. Sells**, FMC director, vice president, executive committee member, and manager of the company's packing equipment division, Riverside, Cal. His successor as manager of the packing equipment division is **Sidney L. Boucher**, assistant manager of the division.

**Missouri Pacific Lines** has re-elected **T. C. Davis** as chairman of the board and **Paul J. Neff** was re-elected president. Mr. Davis is president of the Michigan Chemical Co. of St. Louis, Mich. Mr. Neff also is chief executive officer for the trustee of the Missouri Pacific Lines. **Harry L. Schaeffer** has been appointed general freight traffic manager, to be the railroad's chief traffic officer. Mr. Schaeffer succeeds **Eugene Mock**, retired. Other appointments include: **Cecil L. Butler** to be general freight traffic manager. **Roy J. McDermott**, to be general passenger traffic manager and vice president of the Missouri Pacific Transportation Co. **I. G. Miller**, to be general passenger agent at San Francisco, Cal.

**North Pier Terminal** has elected **Tom Heffner** to the position of vice president in charge of sales. **Lee Craig** was elected to the position of vice president in charge of operations.

**Railway Express Agency** at San Francisco, Cal. has announced the retirement of **Hiram H. Smith**, assistant to vice president **Walter Reese**. The following personnel changes were made in other branches: **J. A. Papa** has been appointed superintendent, Central Illinois division, Chicago, succeeding **J. J. Donovan** who has been named superintendent, Western Illinois-Eastern Iowa division, Chicago, succeeding **R. B. Smith**, retired. **Edward E. Marshall** has been named superintendent of the Indiana division, Indianapolis, succeeding **J. A. Jakes**, transferred to superintendent, Terminal division at Chicago, succeeding **A. G. Smith**, who has moved to superintendent of the Southern Ohio division, Cincinnati. Mr. Smith succeeds **J. W. Johnson**, retired. **William C. Searight** has been named superintendent of the Montana division, Spokane, succeeding **W. G. Watkins**, retired.

**Sterling Manufacturing Co.**, Cleveland, has been purchased by **Junius R. Clark**, former vice president of the Fawick Airflex Co., Inc.

**Trans World Airline** has appointed **J. P. Franke** as district cargo manager in Chicago. Mr. Franke succeeds **Clarence Olson**, resigned. **Charles L. Yates**, formerly Trans World Airline district manager at Toledo, O., has become district manager at London, Eng. **J. C. Stewart**, for two years district manager at London, will be returned to the United States for reassignment to another position in the traffic department.

**Tropical Ice & Cold Storage Co.**, New Orleans, has named **J. A. Bailey**, general manager, succeeding **J. E. Morgan**, resigned.

**U. S. Tires Div.**, U. S. Rubber Co., has appointed **William H. Kneass** central divisional manager at Chicago. He succeeds **Dwight B. Eldred** who has been named assistant sales manager for the division and who has been transferred to the company's New York headquarters.

• • •

**Illinois Furniture Warehousemen's Assn.** has elected **Robert M. David**, Chicago as president, succeeding **Percy H. Prior**, Evanston and Highland Park, Ill., warehouseman. **Richard E. Joyce** was named vice president; **Joseph T. Barrett**, secretary, and **W. S. Conklin**, treasurer. Directors are **Percy H. Prior**, **Joseph L. Corcoran**, **Henry N. Herband**, and **Lee N. Foster**.

National Assn. of Refrigerated Warehouses, Great Lakes Chapter, elected the following officers: **Abe Efroymsen**, Cleveland, chairman; **E. B. Van Ellis**, Vincennes, Ind., vice chairman; and **Philip Kuehn**, Milwaukee, secretary.

Toledo chapter, Material Handling Institute, has been organized, with 78 members. Officers are: **E. H. Marek**, president; **M. A. Cox**, vice president; **A. E. Fryer**, secretary; **N. W. Franklin**, treasurer; **R. H. Rodes**, program chairman; and **J. R. Keyser**, membership chairman. (Kline).

## DISTRIBUTION BRIEFS

**Craig Warehouses, Inc.**, Pocatello, Idaho, has changed its name to **Craven Warehouses, Inc.**, operating under the same management as heretofore.

**Crosley Div., Avco Manufacturing Corp.**, has appointed **Pittsburgh Products Co.**, Pittsburgh, Pa., and **Utility Co., Inc.**, Clarksburg, W. Va., as distributors. Headed by **A. H. Burchfield, Jr.**, president and **R. W. Evans**, vice president and general manager, the Pittsburgh Products Co. is staffed by **R. F. Ashenfelter**, treasurer, **J. E. McConaughy**, secretary, **H. C. Givan, Jr.**, and **L. A. Anderson** as principal executives. The Crosley operation of Utility Co., Inc., will be headed by **Earl Victorson**, vice president.

**C. H. Ellis Co., Inc.**, Indianapolis, has been named state distributor for Hyster lift trucks. The company's Indianapolis headquarters has been equipped with a complete parts and service department. The company also has sales offices in Fort Wayne and South Bend, all handling the complete line of Hyster Co. gasoline-powered lift trucks.

**Euclid Crane & Hoist Co.**, Euclid, O., is a new member of The Material Handling Institute, Inc. **Mr. H. H. Kumlir**, general sales manager, is the official company executive to be represented in the Institute.

**F. L. Murdock and Co.**, of Tulsa, Okla., has been appointed to handle the **Hewitt Rubber Div. line**. **F. L. Murdock** is president. **Frank Monahans** and **Russell Jones** are sales representatives.

**North American Car Corp.** has entered the freight forwarding field through its acquisition of the **Pacific Forwarding Assn.** (Vitkauskas).

The **Union Storage Co.**, Dayton, O., has been purchased by **D. M. Macomber**, an official of **American Warehousemen's Assn.'s member, C. & A. Terminal Co.**, Chicago. **Mr. Macomber**, who will divide his time between the Chicago and Dayton business, advises that the **AWA membership of The Union Storage Co.**, which began in 1903, will be continued.

**Wayne Terminal Cold Storage Co., Inc.**, Fort Wayne, Ind., has been incorporated to engage in a general storage and warehouse business. **J. William Haley** is resident agent, and other incorporators are **Talbott Denny**, Indianapolis, and **Helen Altevogt**, Fort Wayne. (Kline).

## OBITUARY

**Rosell W. Dorsett**, 50, president and founder of the **All-States Freight, Inc.**, president of the **Traffic Study Club** and a past president of the **Akron Motor Transportation Assn.** (Kline).

**Thomas E. Gannett**, owner, **Standard Warehouse Co.**, New Orleans, member, **American Warehousemen's Assn.**

**Clarence Mellor Smith**, 54, president of **Mortax Distributors, Inc.**, New York and traffic manager for **H. L. Green Co.**, member, **Traffic Club of New York.** (Vitkauskas).

**Rupert E. Orcutt**, 80, former manager of the **Orcutt Moving and Storage Co.** (Vitkauskas).

## STRANGLED TRANSPORTATION

(Continued from Page 19)

authorize new funds for building "super-duper" highways with all kinds of frills—to be paid for by the people. Careful and qualified research by competent highway engineers has made available convincing evidence<sup>1</sup> that already-existing highways in the various state systems can be much more efficiently used, with tremendous benefits resulting to the people generally and, quite probably, without any appreciable increase in either capital investment or taxes.

Motor transport will not reach its zenith of service to the public until "bottleneck" laws are re-

scinded. Little plans and negative thinking will not meet the needs of this nation's expanding economy. The transportation problem can only be solved if we open up the unproductive, unused capacities of roads and streets and make certain that these great "sleeping giants"—these modern highway plants—are liberated from strangulation by non-scientific restrictions and from danger of prostration by unwarranted financial burdens.

<sup>1</sup>L. D. Childs, Michigan Highway Department paper before Highway Research Board, Oklahoma City, Jan. 22, 1946; John S. Worley, paper before American Assn. of Highway Officials, Los Angeles, Dec. 18, 1946.

## MARKET RESEARCH

(Continued from Page 49)

23. Are the copy themes really working? What measures do you have to reveal this?

24. Is the distribution of your advertising budget among various uses of your products really backed up by facts?

25. Is the physical distribution of your product handled so as to meet the needs of your market at a minimum cost with regard to methods of transportation, location of factories, and warehouse stocks?

26. Is your sales forecasting procedure adequate for production and sales planning?

27. What do your consumers think of your company as an institution? Do they view you as progressive and efficient or old fogey and sloppy?

28. Are you in close touch with the activities of all government agencies which might have some bearing on your business, such as the Federal Trade Commission, the Food and Drug Administration, the Department of Justice, etc.?

Can top management give the correct answers to all these questions? If not, careful market research may turn out to be the answer that will enable it to mold its marketing practices over into the shape best adapted for the hard days of competitive selling that go with the buyer's market which certainly is with us today. Now is the time to take stock. Now is the time to streamline marketing. Now is the time to employ market research for the results that will probably begin immediately and certainly will be apparent in time.



# Public Warehouse Section

Warehousing is an integral part of distribution in several ways. Public warehouses are not merely depositories for the safeguarding of personal effects or industrial commodities; many are equipped to perform a wide range of services in addition to storage. Among these services are:

Bottling, boxing, financing, fumigating, grading, handling, hauling, labeling, motor transportation, mothproofing, moving, operation of public truck scales, quick-

freeze facilities, rental of space for manufacturing, offices and showrooms, rigging, sales representation, sample distribution, sorting, stevedoring and various other functions for efficient and economical distribution.

This special advertising section of public warehousing has been consolidated for ready reference and maximum utility. It includes merchandise, refrigerated, household goods and field warehouses. For shippers' convenience, states, cities and firms have been arranged alphabetically.

## BIRMINGHAM, ALA.

1880—Sixty-Eight Years of Service—1948

### HARRIS TRANSFER & WAREHOUSE CO.

• South 13th St., Birmingham •

#### Merchandise and Household Goods

• STORAGE • CARTAGE • DISTRIBUTION • FORWARDING

Pool Cars Handled

Member of A.C.W.—A.W.A.—N.F.W.A. Agents for Allied Van Lines, Inc.

## BIRMINGHAM, ALA.

### STRICKLAND TRANSFER & WAREHOUSE CO.

1700-1702 2nd Ave. So., Birmingham 3



General Merchandise Storage and Distribution  
Pool Car Service a Specialty—Motor Truck Service  
Centrally Located—Free Switching from All R.R.s.

## DOTHAN, ALA.

### SECURITY BONDED WAREHOUSE

500-501 East Commerce Street 8

#### POOL CAR DISTRIBUTION

SERVING  
S.E. Alabama  
S.W. Georgia  
N.W. Florida

Receiving—STORAGE—Handling.  
Motor Freight Service to all points.  
6-car Private Siding. Reciprocal Switching.  
Efficient—Conscientious Branch House Service.

## MONTGOMERY, ALA.

Albin D. Peden, President



### Southern Storage Warehouse Co.

1 WEST JEFFERSON - MONTGOMERY 4, ALA

Household Goods Storage • Merchandise Storage  
Moving and Packing • and Distribution

"A Complete Warehousing Service"

## PHOENIX, ARIZ.

### CENTRAL WAREHOUSE CO.

15 East Jackson Street

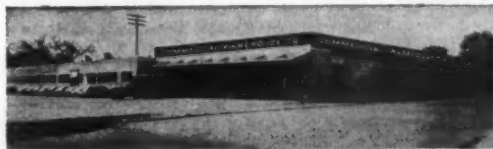
STORAGE  
Complete Service  
Fireproof

DISTRIBUTION  
Private Sidings  
Free Switching

Cold storage warehousing enjoyed a rather high occupancy till Jan. 1948, but since Feb. 1 there has been a depletion of stocks, a natural trend for that time of year. We are finally back to our pre-seasonal ups and downs.—From report of James H. Kuehn, executive vice president, Cold Storage Div., Wisconsin Warehousemen's Assn., at the semi-annual meeting at Madison.

## LITTLE ROCK, ARK.

New one story 90,000 sq. ft. warehouse



### COMMERCIAL WAREHOUSE CO.

This ultra modern warehouse property with six car siding on the Rock Island is completely mechanized. We offer general merchandise warehousing at its best, including pool car distribution, office and display facilities and loans on stored commodities.

300-324 RECTOR STREET

LITTLE ROCK, ARK.



Represented by  
CHICAGO &  
NORTH WESTERN RY.  
Box 10331

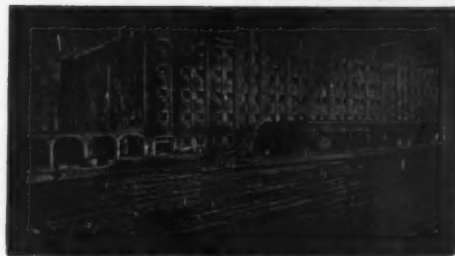


ALLIED DISTRIBUTION INC.  
NEW YORK 18  
WEST 22ND ST.  
Penn. 6-0967

## LITTLE ROCK, ARK.

### ARKANSAS' LARGEST WAREHOUSE

Merchandise—Household Storage



• Fireproof  
Construction  
• Pool Car  
Distribution  
• Agent  
Allied Van  
Lines

### TERMINAL WAREHOUSE CO.

Member American Warehousemen's Association  
American Chain of Warehouses

LITTLE ROCK

ARKANSAS

## HOLLYWOOD, CAL.

Complete  
Commercial  
Storage Facilities

OPERATING WAREHOUSES  
IN PRINCIPAL CALIFORNIA CITIES

# BEKINS

VAN & STORAGE CO.

1825 N. HIGHLAND AVE.  
Bill Elliott, Manager

## LOS ANGELES, CAL.

The

1248 WHOLESALE ST.  
Merchandise Exclusively

STORAGE  
DISTRIBUTION  
TRANSPORTATION

# CALIFORNIA WAREHOUSE

LOS ANGELES 21  
Sprintford—A.D.T.

LOS ANGELES, CAL. ....  
SERVING THE PACIFIC COAST—THE MOST POPULAR MOVER IN THE WEST

Member MFWA & AWA



**LYON**  
VAN & STORAGE CO.  
General Office 1950 So. Vermont Ave.  
Frank A. Payne, Pres.

LOS ANGELES, CAL.

**Overland Terminal Warehouse**

Served by 1807 East Olympic Blvd.  
Los Angeles 21

 **General Merchandise Storage**  
Sprinklered—A.D.T.  
U. S. Customs Bonded Warehouse No. 11  
Cool Room Accommodations

For Complete Information Write Us Direct  
or Handle with Our Associates  
**CROOKS TERMINAL WAREHOUSE, INC.**

CHICAGO 7	NEW YORK 16	KANSAS CITY 7
433 W. Harrison St.	271 Madison Ave.	1104 Union Ave.

Or Nearest General Agency Union Pacific Railroad

LOS ANGELES, CAL. MEMBER OF A.W.A.

**PACIFIC COAST TERMINAL WAREHOUSE COMPANY**

1340 E. SIXTH ST. LOS ANGELES 21, CAL.  
MERCHANDISE STORAGE AND DISTRIBUTION  
Located in the heart of the Wholesale District

LOS ANGELES, CAL. **REPUBLIC VAN & STORAGE CO.**

**WAREHOUSING—DISTRIBUTING—CARTAGE**

147,000 sq. ft. in downtown L. A. 9 car switch covered dock—small blocks of space for lease.

**COAST TO COAST VAN SERVICE**  
214 No. Alameda  
Export Packing & Crating Tucker 6101

LOS ANGELES, CAL. 1817-1855 INDUSTRIAL ST., LOS ANGELES 21

**Star Truck & Warehouse Co.**

COMPLETE FACILITIES EFFICIENT SERVICE  
SPRINKLERED—A.D.T.

Storage Distribution Drayage  
240,000 Square Feet Represented by Distribution Service  
New York Chicago 117 Pieces Motor Equipment San Francisco

OAKLAND, CAL. SINCE 1900

**GENERAL MERCHANDISE**  
Warehousing—Distributing—Draying

**HOWARD TERMINAL**  
95 Market Street, Oakland 4  
Warehouses Steamer Pier

SACRAMENTO, CAL.

**LAWRENCE**  
Warehouse & Distributing Co.  
STORAGE

MERCHANDISE — HOUSEHOLD GOODS  
POOL CAR DISTRIBUTING — DRAYAGE  
Your Detail Handled as You Want It

206 & JAY STS., P. O. EX. 1191 SACRAMENTO 6

SACRAMENTO, CAL. **ARTHUR E. TRAVIS, President**

**WESTERN VAN & STORAGE CO., Inc.**  
108 K Street Sacramento, Cal.

Merchandise and Household Goods Warehouse  
Specializing in General Merchandise and Household Goods.  
Private Siding on S.P.R.R.—4. Car Capacity. Distribution of Merchandise and Household Goods Pool Cars. 60,000 feet, sprinklered.

SAN FRANCISCO, CAL. "Your BRANCH OFFICE in San Francisco"

**GIBRALTAR WAREHOUSES**

CUSTOM BONDED — GENERAL MERCHANDISE

**Complete Warehousing and Distributing Service . . . . .**

DRAYING • OFFICE SPACE  
POOL CAR DISTRIBUTION

1250 Sansome St., San Francisco, Calif.

REPRESENTED BY ASSOCIATED WAREHOUSES INC.

NEW YORK	CHICAGO
52 Vanderbilt Ave.	549 West Randolph St.
NY 9-7645	RA 4452

SAN FRANCISCO, CAL.

**HASLETT WAREHOUSE COMPANY**  
246 BATTERY STREET, SAN FRANCISCO 11

Largest and most complete storage and trucking service on the Pacific Coast

Operating in San Francisco, Oakland, Stockton and Sacramento  
Member: American Warehousemen's Assn.  
American Chain of Warehouses, Inc.

SAN FRANCISCO, CAL. Phone Underhill 7500

**MARKET STREET VAN & STORAGE**  
1871 Mission St., San Francisco 3

Complete Household Goods Service

 **Pool Car Distribution**  
Tim Griffin, Pres. - Jim Cummins, Sec. Treas.  
In Los Angeles, operating Coast Van & Storage

SAN FRANCISCO, CAL. Sutter 1-346

Member American Warehousemen's Association  
Distribution Service, Inc.

**Complete Warehousing SERVICE**



General Merchandise  
United States Customs and Internal Revenue Bonded Storage.  
Draying and Pool Car Distribution  
Office Accommodations and Telephone Service.

**San Francisco Warehouse Company** 565 Third Street  
SAN FRANCISCO 7

SAN FRANCISCO, CAL. MEMBER: Allied Distribution, Inc.

**SOUTH END WAREHOUSE COMPANY**

Free Storage—Custom Bonded—Internal Revenue Bonded  
Drayage Service

**King and Company**  
Drayage

and Firms are Arranged Alphabetically

DENVER, COLO.

Port Lift & Pallets exclusively

**THE BARKERS WAREHOUSE COMPANY**  
 TELEPHONE AL 3451 2145 BLAKE STREET, DENVER 2, COLORADO  
 GENERAL MERCHANDISE STORAGE—POOL CAR DISTRIBUTION  
 A.S.T. Protection—Private siding C. B. & Q.—U.P. Also operates  
 Warehouse at Brighton, Colo.  
 Represented By  
 Associated Warehouses, Inc.—Chicago & New York City

GIVING BETTER SERVICE TO THE ROCKY MOUNTAIN REGION...

**NORTH DENVER**  
 Transfer & Storage Co.  
 Modern, fireproof warehouses—  
 located in the West. Custom-  
 bonded storage and office space  
 available.

Office 2030 Blake St.  
 Represented by  
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 1525 NEWBERRY AVE.  
 Men. 5531  
 DENVER, COLORADO  
 ALLIED DISTRIBUTION INC.  
 NEW YORK 18  
 11 WEST 42ND ST.  
 Penn. 6-0967

DENVER, COLO.

**WEICKER** Complete Service  
 ★Mds. & Hhg. Goods Storage  
 ★Pool Car Distribution  
 ★Moving, Packing, Forwarding  
 We Operate a statewide, daily motor freight service under  
 regulation of the Public Utilities Com. Connection with  
 Interstate Truck Lines to Principal Cities.  
 SILVER VAULTS, CEDAR LINED RUG VAULT,  
 FUMIGATING VAULT, PRIVATE LOCKERS  
**THE WEICKER TRANSFER & STORAGE CO.**  
 1700 Fifteenth, Denver 17, Colo.  
 Member of N.F.W.A.—A.C.W.—A.W.A.—Dist. Serv., Inc.  
 Agent, Allied Van Lines

LA JUNTA, COLO.

**SERVING the ARKANSAS VALLEY**  
**of SOUTHEASTERN COLORADO**  
 MERCHANDISE DISTRIBUTION  
 WITHIN TRADE TERRITORY  
 COMPLETE WAREHOUSE FACILITIES  
 Save Excessive LCL Freight  
 Spot Carloads — Distribute From  
**Security Warehouses, INC.**  
 719 East First Street La Junta, Colorado  
 Fireproof — Sprinklered — Mechanized — Bonded — Insured

PUEBLO, COLO.

Member of May. W. A. — A. W. A. — Colo. W. A.  
**BURCH** WAREHOUSE AND  
 TRANSFER CO., INC.  
 General Office and Warehouse  
 200 SO. SANTE FE AVENUE  
 Modern Sprinklered Fireproof Building—Freight Forwarding  
 and Distribution — Household and Merchandise Storage  
 PACKING AND SHIPPING  
 Represented by  
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 1525 NEWBERRY AVE.  
 Men. 5531  
 NEW YORK 18  
 11 WEST 42ND ST.  
 Penn. 6-0967

PUEBLO, COLO.

128-130 SOUTH MAIN

**WEICKER** TRANSFER & STORAGE CO.  
 ★ Modern Sprinklered Building ★ Pool Car Distribution  
 ★ Household and Merchandise ★ Freight Forwarding and Distribution  
 ★ AGENT ALLIED VAN LINES—

BRIDGEPORT, CONN.

**The Bridgeport Storage Warehouse Co.**  
 General Offices 10 Whiting St.  
 Bridgeport 1  
 General Merchandise Storage and Distribution  
 Total Storage Area 67,000 Sq. Ft.  
 Household Goods, Moving, Packing and Shipping  
 N. Y., N. H. and H. R. R. Siding  
 Member

HARTFORD, CONN.

**LET DEWEY DO IT!**  
 Warehousing and Distribution  
 Household Goods Storage  
 and Moving since 1899  
 Agents United Van Lines  
**GEO. E. DEWEY & CO.**  
 1214 Main St., Hartford 3, Conn.

HARTFORD, CONN.

Established 1902  
**THE DOYLE STORAGE COMPANY**  
 Formerly Silence Warehouse Co., Inc.  
 335 Trumbull Street Hartford, Conn.  
 HOUSEHOLD GOODS EXCLUSIVELY  
 Fireproof Warehouses  
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HARTFORD, CONN.

**HARTFORD DESPATCH**  
 and WAREHOUSE CO., Inc.  
 210 CAPITOL AVENUE, HARTFORD, CONN.  
 U. S. Bonded Warehouses Pool Car Distribution Household and  
 Merchandise facilities Private Siding Our fleet covers Connecticut  
 and Massachusetts daily. Warehouses at Bridgeport, Conn., and Springfield, Mass.  
 Members NFWA—AWA—ACW—AVL Agents

HARTFORD, CONN.

Moving — Trucking — Storage — Pool Cars  
**NATIONWIDE DESPATCH & STORAGE CO.**  
 9 CENTER ST., HARTFORD 5, CONN.  
 22,000 sq. ft. of Storage Space—Bell System  
 Teletype HF469—Consign shipments via N. Y.,  
 N. H. & H. R. R.  
 OFFICE AND DISPLAY SPACE AND  
 TELEPHONE SERVICE AVAILABLE  
 SPECIALIZING IN POOL CAR  
 DISTRIBUTION

NEW HAVEN, CONN.

**THE ATLANTIC BONDED WAREHOUSE CORP.**  
 114 Ferry Street P. O. Box 33 New Haven 1, Conn.  
 Merchandise Storage U. S. Customs and Internal Revenue Bonded  
 Specializing in Liquors and Foodstuffs  
 Private siding NYNH&H R.R. All Trucking Facilities  
**POOL CAR DISTRIBUTION**  
 Member of AWA—Conn. WA—New Haven C of C.

NEW HAVEN, CONN.

M. E. KIELY, Pres.  
**DAVIS STORAGE COMPANY**  
 335 East St., New Haven 2, Conn.  
 Modern Fireproof Merchandise Warehouse  
 Private seven-car Siding, adjacent to Steamship and  
 R. R. Terminals. Pool and stop over cars distributed.  
 Merchandise Storage.  
 Motor Truck Service to all towns in Connecticut.  
 Low Insurance Rate. Prompt, Efficient Service.  
 Member of Connecticut Warehousemen's Assoc.



NEW HAVEN, CONN.

## STORAGE and DISTRIBUTION



Established 1860

Merchandise, automobiles, furniture—23 buildings—ADT supervised watchman service—Low insurance rates—15 car siding—Central location—Daily truck delivery service covering Connecticut and southern Massachusetts—Bonded with U.S. Customs.

### THE SMEDLEY CO.

185 Brewery St.,  
New Haven 11, Conn.

Members:  
AWA, NFWA, CWA, New Haven Chamber of Commerce,  
Agent, Allied Van Lines, Inc.



CHICAGO S.  
1535 NEWBERRY AVE.  
Mon. 5:31.

Represented by  
The District Sales Group

ALLIED DISTRIBUTION INC.

NEW YORK 18,  
WEST 42ND ST.  
Penn. 6-0967



NEW HAVEN, CONN.

PAUL A. DAHLGARD, Owner



## West Haven Trucking Company Storage Warehouses

Offices, 435 Congress Ave., New Haven 11  
Moving and Storage of Household  
Goods Exclusively

Member Connecticut Warehousemen's Association  
New Haven Chamber of Commerce

TORRINGTON, CONN.

Established 1860



## The E. J. Kelley Co. Storage Warehouses

Main Office Torrington, Conn.—Telephone 9243

One of New England's Largest Transportation Companies

Household Goods Packed, Sorted, Shipped.  
Merchandise Storage and Distribution.  
Pool Cars Distributed in All Parts of Connecticut  
Branch Offices in Bridgeport, Hartford, New Haven  
& Waterbury, Conn.; Springfield & Worcester, Mass.

WASHINGTON, D. C.

## THE JACOBS TRANSFER COMPANY, INC.

Est. 1897

61 Pierce Street, N. E. Washington 2, D. C.

Phone: District 2412

### SERVICES in Washington and its Commercial Zone:

1. POOL CAR DISTRIBUTION  
On B. and O. R.R. Siding
2. CAR LOAD DISTRIBUTION  
Any Railroad—B. and O. Nearer
3. LOCAL CARTAGE All Types  
Fast—Economical—Dependable

WASHINGTON, D. C.

More than two million cubic  
feet of Storage space

DON'T MAKE A MOVE WITHOUT  
SHIPPING TO ...



**SMITH'S**

TRANSFER &  
STORAGE CO.  
1313 You St., N.W.  
Washington, D. C.

WASHINGTON, D. C.

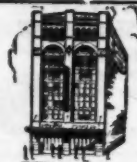
W. E. EDGAR, Mgr.

## THE TERMINAL STORAGE COMPANY OF WASHINGTON

First, K and L Streets, N. E., Washington 2  
Large buildings of modern construction, total floor area 304,000  
square feet, of which 109,000 square feet is of fireproof construction. Storage of general merchandise.  
CONSIGN SHIPMENTS VIA B. & O. R. R.  
Heated rooms for protection against freezing  
Member of American Warehousemen's Association

WASHINGTON, D. C.

Established 1901



## UNITED STATES STORAGE COMPANY

418 10th St., N.W., Washington 4, D. C.

We Reciprocate Shipments

Member of N.F.W.A.—W.W.A.

JACKSONVILLE, FLA.

Established 1925

## LANEY & DUKE

Storage Warehouse Co., Inc.

657 East Bay St. - - - Phone 5-7851

MERCHANDISE STORAGE—POOL CAR DISTRIBUTION

Fireproof  
Construction

Represented by  
CHICAGO S. 1535 NEWBERRY AVE.  
Mon. 5:31

NEW YORK 18,  
WEST 42ND ST.  
Penn. 6-0967

JACKSONVILLE, FLA.

D. W. DORAN, President

HARRY GARDNER, Vice-Pres.

## SERVICE WAREHOUSE COMPANY, Inc.

403 E. Bay Street, P. O. Box 908, Jacksonville 1

TWENTY-FIVE YEARS OF SERVICE IN THE STORAGE,  
DRAYAGE AND DISTRIBUTION OF POOL CAR MERCHANDISE. 34,840 SQUARE FEET SPACE. SOUTHERN RAILWAY  
SIDING, CAPACITY 12 CARS, RECIPROCAL SWITCHING.

Member of A.W.A.—J.W.A.

JACKSONVILLE, FLA.

FLORIDA'S LARGEST WAREHOUSE



## Union Terminal Warehouse Company

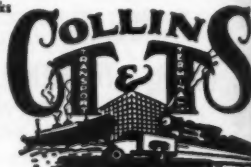
700 East Union Street, Sta. G

Merchandise Storage—Custom Bonded—Pool Car Distribution—Reconsigning—Trucking Service—Trackage  
52 Car—Reinforced Concrete—Sprinkler System—  
A.D.T. Service—Insurance Rate 12 Cents.  
Rental Compartments—Sub-Postoffice.  
Members A.W.A.—A.C.-of-W.—J.W.A.

MIAMI, FLA.

Pier 1, Municipal Docks

Merchandise Storage—  
Crane Service—Moving and  
Packing—Commercial  
Trucking—Pool Car Distribution—Private Siding



MIAMI, FLA.

## COLONIAL Storage Company

82 - NORTHEAST 26th STREET  
MIAMI 37, FLORIDA



WAREHOUSING  
POOL CAR DISTRIBUTION  
COMMERCIAL HAULING  
SIDINGS ON BOTH RAILROADS

TELEPHONE 82-7671

INTERNATIONAL BOND

## INTERNATIONAL BONDED WAREHOUSE CORP.

U. S. CUSTOM BONDED

Member of American Warehousemen's Association  
and Southeastern Warehousemen's Association  
Negotiable Warehouse Receipts

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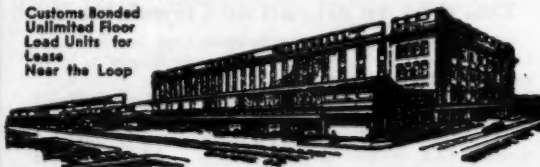
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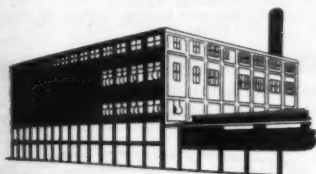
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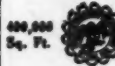
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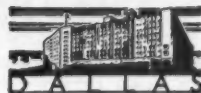
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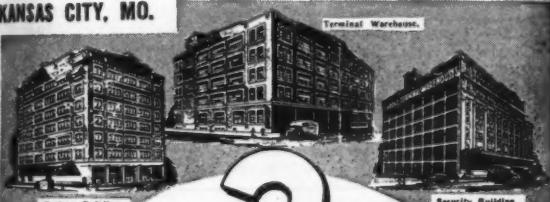


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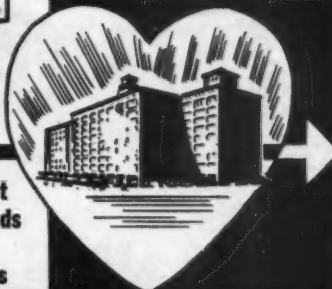
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Members: A.W.A.—N.F.W.A. Agents for Allied Van Lines, Inc.



and Firms are Arranged Alphabetically

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Make Our Warehouse Your Branch Office for Complete Service in New Hampshire

NASHUA, N. H.

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Offices 624 Willow St.

"Crating Furniture our Specialty"

General Merchandise Storage and Distribution, Household Goods, Storage, Cold Storage, Unexcelled Facilities. Pool Car Distribution Direct R. R. Siding, Boston & Maine R. R.

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DOMESTIC & FOREIGN SHIPMENTS — HOUSEHOLD GOODS STORAGE

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Directly Opposite Cortlandt Street, New York

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**FACILITIES**—3 units . . . fireproof, brick and concrete. Penna. R. R. private siding—32-car capacity; connections with all roads entering city. Merchandise storage. Manufacturing and office space, 1,650,000 sq. ft.; sprinkler; automatic fire alarm. Insurance rate: .09%. Platform capacity, 40 trucks. Cold storage: Coolers, 1,608,000 cu. ft.; freezer 1,182,000 cu. ft.—total 2,790,000 cu. ft.; convertible; automatic fire alarm. Insurance rate: .06. Brine refrigerator system; temperature range, 0° to 50° F.; cooler-room ventilation; humidity control; 20-truck platform. Dock facilities: Waterfront dock, 600 ft.; minimum draft 21 ft.; pier berth, 60.0 ft.; bulkhead draft, 25-30 ft.

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**ASSNS.**—A. W. A. (Cold Storage Div.); W. A. Port of New York; Mar. Asso.; N. Y. Mer. Exch.; Com. & Ind. Asso., N. Y.; Jersey City C. of C.

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"100% OPS IN NEW JERSEY"

18 floors of modern fireproof, sprinklered warehouse space. 250,000 square feet, low insurance rates, centrally located in downtown Newark.

GENERAL MERCHANDISE stored, distributed

HOUSEHOLD GOODS

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MEMBER: N.J.F.W.A. and N.F.W.A.

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Deliveries promptly made

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19 GIANT FLOORS MODERN UNLOADING FACILITIES

200,000 SQ. FT. OF SPACE

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HOUSEHOLD STORAGE CO.

Sole Agent in Buffalo for Allied Van Lines, Inc.

Two warehouses with greatest capacity in

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MODERN BUILDINGS — PRIVATE SIDING

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Modern—Fireproof—Low Insurance Rate  
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TERMINALS**

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STORAGE AND LOCAL OR LONG  
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HOLD FURNITURE



SPECIALISTS  
IN STORING  
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FOR  
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**WILSON WAREHOUSE CO.**

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Low Insurance Rate Branch office facilities



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NEW YORK 16  
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Room 4-2637

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Established 1884

**CLEVELAND STORAGE CO.**

MERCHANDISE STORAGE—CARLOADS IN  
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All communications Cleveland, Ohio. Office, 619 Guardian Bldg. (14)

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Established 1903

**Flushing Storage Warehouse Company**

FIREPROOF WAREHOUSES — HOUSEHOLD GOODS

Storage — Moving — Packing — Shipping

Serving all of Long Island

Member of Nat'l Furn. Whsemen's Assn., N. Y. State  
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For household goods, merchandise, Pool car distribu-

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Local and Long Distance moving. Serving

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N. Y. State Warehousemen's Association

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MERCHANDISE STORAGE • COLD STORAGE

Specializing: Cream, Frozen Fruits, Vegetables, Meats, Etc.

4500 Sq. Ft. Merchandise Storage Space. 138,000 Cu.

Ft. of freezer space; 50,000 cu. ft. of cooler space.

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Private Sidings — Main Line N. Y. C. R. R.



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180,000 SQUARE FEET DRY STORAGE SPACE  
FULLY SPRINKLERED — TRANSIT STORAGE



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Packers and Shippers of Fine Furniture  
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Also Serving

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Stipulated Chemical Warehouses  
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House to house moving round the World of Household Effects and Art Objects in Steel and Wood Lift Vans.



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We specialize in storage and transfer of Household Goods. Pool cars distributed. Our warehouses, brick and steel construction, offer highest degree of safety. Trucks, trailer, tractor and lift van. Consign via all R.R.'s sta. New York. For Mt. Vernon, consign via N.Y.C.-NY,NH&H sta. Mount Vernon.

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Mount Vernon—27-33 So. Sixth Ave. Bronxville—100 Pondfield Rd.



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EASY ACCESSIBILITY QUICK HANDLING  
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TWO MODERN FIREPROOF WAREHOUSES  
SPRINKLERED SECTIONS LOW INSURANCE RATES



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Agent ALLIED VAN LINES, Inc.

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DAILY DISTRIBUTION SERVICE TO  
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Motor Vans, Packing, Shipping  
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and Firms are Arranged Alphabetically

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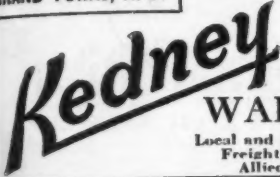


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General Storage—Cold Storage—Household Goods  
Established 1906

Three warehouse units, total area 161,500 sq. ft. of this 20,000 sq. ft. devoted to cold storage. Two buildings specially equipped. Low insurance costs. Spot stocks, pool car distribution. Complete warehouse services. Fargo serves North Dakota and Northwestern Minnesota. Offices 806-10 North Pacific Ave. AWA-NFWA-MNWWA-ACW

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GENERAL STORAGE  
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### WAREHOUSE CO.

Local and Long Distance Hauling of  
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Allied Van Lines—Agent

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### COTTER CITY VIEW STORAGE CO.

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A.D.T. Alarm.  
Pool Car Distribution.  
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Merchandise, Household Goods, Cold Storage

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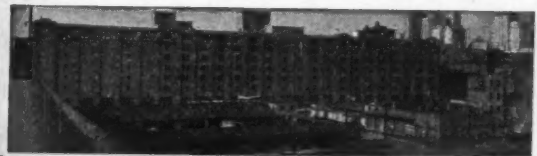
Pool cars distributed. Private sidings.  
Free switching on all roads. Separately  
fire-proof warehouses for household  
goods.

Member: A.C.W.—MAY.W.A.—  
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Member of A.W.A.—O.W.A.



9,000,000 Cubic Feet Strictly Fireproof

Select the Warehouse Used by the Leaders!

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## CLEVELAND, OHIO

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Established 1889



"AN OLD ORGANIZATION WITH YOUNG IDEAS"

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Cleveland's Only Lakefront  
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Cleveland 14

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1200 West Ninth Street, Cleveland 13, Ohio

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General Storage, Cold Storage, Office Space and Stevedoring  
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New York Representative—Mr. H. J. Lushbaugh  
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## CLEVELAND, OHIO



## CLEVELAND, OHIO

The OTIS TERMINAL WAREHOUSE  
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TO MEET ALL OF YOUR NEEDS  
Downtown location; Modern and fireproof; Low insurance rates;  
Enclosed docks and siding on Big 4 Railroad; Daily delivery service;  
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Cleveland's Most Modern Warehouse

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Complete Merchandise Storage and Pool Car Service.  
Mechanical Handling and Pallet System.

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CHICAGO

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Superior 7180

CLEVELAND 15, OHIO

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Established in 1883

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Modern warehouses and storage facilities.  
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Complete service for  
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Private Siding NYC and Big Four  
14 Car Capacity  
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Modern warehouse for merchandise—Low Insurance—Central location in jobbing district—Private railroad siding—Pool cars distributed.  
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Pennsylvania Railroad and Lowry Avenue

A warehouse service that embodies every modern facility for the storage and distribution of Household Goods and Merchandise — Motor Freight Service.

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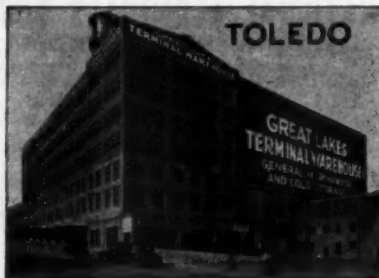
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## CAR CAPACITY

800—COLD  
400—DRY

## FOUR PRIVATE

SIDINGS  
N.Y.C. AND  
B.&O. RR's



GREAT LAKES TERMINAL WAREHOUSE CO.  
321-359 MORRIS ST. TOLEDO 4, OHIO  
COMPLETE WAREHOUSE FACILITIES

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## MERCHANTS AND MANUFACTURERS WAREHOUSE CO.

Office and Main Warehouse: 15-23 So. Ontario St., Toledo 3  
CENTER OF JOBBING DISTRICT

Sprinklered Buildings—100,000 square feet Dry Storage—70,000 cubic feet Cool Storage—Private Sidings—Nickel Plate Road Free Switching—Merchandise Storage—Pool Car Distribution—Negotiable Receipts—Transit Storage Privileges—Low Insurance Rate—City Delivery System.



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100,000 Square Feet Dry Storage of which 65,000 Square Feet is heated for winter storage—Sprinklered Buildings—Complete ADT Fire and Burglary Protection—5 Car Siding—New York Central Railroad—Free Switching—Pool Car Distribution—Transit Storage Privileges—Merchandise Storage—Negotiable Receipts—Low Insurance Rate—City Delivery Service—Leased Space.



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## "QUICK SHIPPERS"

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Merchandise storage • Pool car distribution • Fireproof • Private siding Nickel Plate Road • Free switching • Negotiable receipts • Transit storage arrangements • Motor truck service • Located in Jobbing District

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# YOUNGSTOWN, OHIO

Since 1878



## Fisher-Cilder CARTAGE & STORAGE CO.

Household Goods — Pool Car Distribution — Merchandise — Fireproof Warehouse — Private Rail Siding

# LAWTON, OKLA.

Agents: Aero Mayflower Transit Co.



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General Warehousing and Distribution

Member: A. W. A.

# OKLAHOMA CITY, OKLA.

Established 1897

## O. K. TRANSFER & STORAGE CO.



GENERAL WAREHOUSING AND DISTRIBUTION

# TULSA, OKLA.

## JOE HODGES FOR MERCHANDISE...

MOVING  
PACKING  
STORAGE

Oklahoma's largest warehouse, modern, fireproof and sprinkler equipped. 106,500 square feet, available for all kinds of storage. Entire floor, 35,500 square feet devoted to Merchandise. 315 private rooms. Lowest insurance rate in Tulsa. Heavy hauling, cross country or local. Big vans, deeply padded. Overnight Express Service between Tulsa and Oklahoma City. At freight rates! Mixed cars a specialty. Private siding on Santa Fe and Frisco, switching facilities with all R.R.'s entering Tulsa.

MEMBERS: A.V.L.—N.F.W.A.—A.W.A.—A.C.W.—S.W.A.

FIREPROOF WAREHOUSES  
Tulsa Oklahoma

# TULSA, OKLA.

R. W. PAGE, President

## PAGE STORAGE & VAN LINES

1301 So. Elgin, Tulsa 5

Storage—Moving—Packing—Shipping of Household Effects and Works of Art—Silver and Rug Vaults



Occupied space in public merchandise warehouses throughout the United States increased slightly in March 1948 over the same month in 1947, 89.4 over 88.6 percent. In March 1940 it was 73 percent. Milwaukee figures show 95.6 as against 94.8 percent for the same periods. In the rest of Wisconsin the figures were 93.6 as against 97.1.—From the report of R. J. Laubenstein, executive vice president, Merchandise Div., Wisconsin Warehousemen's Assn., at the semi-annual meeting at Madison.

and Firms are Arranged Alphabetically

## PORTLAND, ORE.



H. C. GOBLE, Manager-Owner

*Arriving to Serve You*

WITH COMPLETE WAREHOUSING  
LOCAL CARTAGE AND  
DISTRIBUTION POOL CAR ENGINEERS



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Represented by Associated Warehouses, Inc.  
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C. W. NICHOLAS, Pres. Est. 1902

**O. H. Nicholas Transfer & Storage Co.**  
324 So. McKean St.

*Merchandise and Household Goods*

Pool Car Distribution      Packing and Crating  
3 Car Siding              Free Quotations

2 Warehouses 41,000 sq. ft.

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## IN ERIE IT'S THE ERIE WAREHOUSE COMPANY

FOR COMPLETE STORAGE SERVICE AND POOL CAR DIS-  
TRIBUTION TO SURROUNDING TERRITORY.

**2 WAREHOUSES**

1925 HOLLAND  
N.K.P. RR.

1502 SASSAFRAS  
N.Y.C. RR.

## HARRISBURG, PA.

INC. 1902

## HARRISBURG STORAGE CO.

COMPLETE STORAGE & POOL CAR  
DISTRIBUTION SERVICE

100% PALLETIZED

PENNSYLVANIA RAILROAD SIDING

MEMBER — "AMERICAN WAREHOUSEMEN'S ASSN."

## HARRISBURG, PA.

## HARRISBURG WAREHOUSE CO.

GENERAL MERCHANDISE STORAGE  
POOL CARS DISTRIBUTED  
BRICK BUILDING—LOW INSURANCE  
STORE DOOR DELIVERY ARRANGED FOR  
PENNA. R. R. SIDING  
OPERATING KEYSTONE WAREHOUSE

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*Erie's Complete  
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Service*



M. V. IRWIN is Erie's Mayflower agent offering un-  
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facilities.

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- SORTING
- STORAGE
- FUMIGATING
- PUBLIC SCALES
- MOTHPROOFING
- MOVING
- HAULING
- LABELING
- FINANCING
- RUG CLEANING
- STEVEDORING

TRANSPORTATION  
POOL CAR DISTRIBUTION

**M.V. IRWIN** CO.  
**MOVING-STORAGE**

**12<sup>th</sup> & CASCADE PHONE 24-779**  
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Est. 1915  
**KARN'S STORAGE, INC.**  
 Merchandise Warehouse L.V.R.R. Siding  
 Storage in Transit Pool Car Distribution  
 Packing — Shipping — Hauling  
 Fireproof Furniture Storage  
 Members: Mayflower W.A.—P.F.W.A.—P.W.A.

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**LANCASTER STORAGE CO.**

LANCASTER, PA.  
 Merchandise Storage, Household Goods, Transferring,  
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 Manufacturers' Distributors, Carload Distribution, Local and  
 Long Distance Moving  
 Member of May.W.A.

NEW CUMBERLAND, PA.

SUBURB OF HARRISBURG, PA.

**M. F. ROCKEY STORAGE CO.**

Sixth Street & P.R.R. New Cumberland, Pa.  
 Moving—Storage—Packing—Shipping  
 Clean Private Rooms for Storage of Furniture  
 Member of NFWA—ATA—PMTA—PFWA Agents: Allied Van Lines  
 Telephone: 4-0129 Harrisburg

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Member of A.W.A.—P.W.A.

**Commercial Warehousing Co.**

Meadow and Wolf Sts. Philadelphia 48  
 Complete Warehousing Service for Storage and  
 Distribution of General Merchandise.  
 Private Siding B. & O. • Pool Car Distribution  
 Low Insurance Rates



**FIRST IN PHILADELPHIA**

"Pennsylvania" should be the keystone of your distributional setup in Philadelphia... your first choice for a number of good reasons.

In the nation's third largest market, "Pennsylvania" offers 22 big, modern, strategically located warehouses, with total storage-space of more than 1,000,000 square feet. Here you get up-to-the-minute services and facilities for the safe, swift, efficient, and economical handling and storage of your merchandise. Rail and highway connections are excellent. A large fleet of modern trucks, of various sizes, is available for fast store-door deliveries. Insurance rates are low.

Write for details about our free and bonded storage-facilities for any type of commodity.



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**WAREHOUSING & SAFE DEPOSIT COMPANY**

4th and Chestnut Streets, Philadelphia 6

**13 MODERN WAREHOUSES**

*In Key Locations in the Philadelphia Trading Area*

Over three million square feet of modern storage space, situated to serve metropolitan Philadelphia to the best advantage.

Buildings are thoroughly staffed and equipped for the safe storage and fast, efficient, economical handling of all kinds of merchandise. "Terminal"

also offers special facilities for the suitable storage of household goods.

Connections with both the Pennsylvania Railroad and Reading Company. Completely equipped pool car department. Store-door delivery. Convenient to Delaware River piers. Write for particulars.

**TERMINAL WAREHOUSE COMPANY**

DELAWARE AND FAIRMOUNT AVES. ★ PHILADELPHIA 23



Members: A.W.A., N.F.W.A., and Pa.F.W.A.

NEW YORK 4 2 Broadway. SAN FRANCISCO 7 625 Third Street. CHICAGO 11 219 E. North Wacker St.,  
 Phone: Bowling Green 9-0786 Phone: Sutter 3461 Phone: Superior 7180  
 Represented by DISTRIBUTION SERVICE, Inc.—An Association of Good Warehouses Located at Strategic Distribution Centers



and Firms are Arranged Alphabetically

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**Fidelity Storage and Warehouse Company**

General Offices—1811 Market St., Phila. 3

Agents for Allied Van Lines, Inc.

Bus type vans for speedy delivery anywhere. We distribute pool cars of household goods. Prompt remittance.

Assoc. N. F. W. A., Can. W. A., P. F. W. A.



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Established 1868

**Gallagher's Warehouses, Inc.**

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Merchandise Storage Storage in Transit Direct Sidings-Penna. RR. and Reading RR.

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2,100,000 Square Feet

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12 modern warehouses located in important shipping centers. Served by all railroads. Loading and unloading under cover. Storage-in-transit privileges. Goods of all kinds, bonded and free.



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Members A. W. A.

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ESTABLISHED 1845

**SHANAHAN**

General Agents

Aero Mayflower Transit Co.

Fireproof Warehouses — Household Goods

125,000 sq. ft. 62,500 sq. ft.

3400 5th Avenue 7535 Penn Avenue

PITTSBURGH, PA.



**PITTSBURGH, PA.**

**ED WERNER TRANSFER & STORAGE COMPANY**

1917-19 Brownsville Road

Pittsburgh, Penna.

Storage, Packing and Shipping

Member of National Furniture Warehousemen's Ass'n.

Agent of Allied Van Lines, Inc.



**PITTSBURGH, PA.**

Thomas White Owner and Manager

13th and Smallman Sts., PITTSBURGH 22

**In the Heart of Pittsburgh's Jobbing District**

STORAGE IN TRANSIT - PRR SIDING

COMPLETE TRUCKING FACILITIES

A. D. T. PROTECTION

**WHITE** Terminal Company  
13th and Smallman Sts.

Also Operators of  
WHITE MOTOR EXPRESS CO.  
Established 1918



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the newest and most modern storage  
in Western Pennsylvania



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TEL.: MA. 4567 - FI. 3300

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**R. F. POST DRAYMAN  
AND POST STORAGE, INC.**

LOCAL & LONG DISTANCE MOVING  
MANUFACTURERS' DISTRIBUTORS  
HEAVY HAULING & RIGGING  
HOUSEHOLD GOODS STORAGE  
PACKING, CRATING, SHIPPING

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DISTRIBUTION

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*Cold Storage—Merchandise—Household Goods*

2 Warehouses with private sidings on Erie & PRR's reciprocal  
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**WILKES-BARRE STORAGE CO.**

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Prompt and Efficient Service  
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Storage-in-Transit and Pool Cars  
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• Safe Dry Storage for Merchandise and  
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• Immediate Distribution • Improved Methods • Care in Handling  
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General Merchandise Storage and Pool Car Distribution  
Intrastate and Interstate Common Carrier

70,000 sq. ft. of modern fireproof  
warehouse space serviced with up-to-date truck  
and materials handling equipment

Complete ADT burglar and fire alarm protection

SYSTEMS AND EQUIPMENT currently used or pro-  
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will be discussed by staff writers and industry spokes-  
men in DA for September.

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**Merchandise and Household Goods  
STORAGE and DISTRIBUTION**

Modern Concrete Warehouse. 100,000 Square Feet of Storage Space.  
Private Tracks Connecting with All Railroad and Steamship Lines.  
Motor Truck Service. Low Insurance Rates.

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Distribution Center of South Carolina



**CAROLINA BONDED STORAGE CO.**

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General merchandise and household  
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Pool Car Distribution. Private rail sid-  
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**General Warehouse Co.**

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"Good housekeeping, accurate records,  
Personal Service"

Located in the center of the Jobbing &  
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Sprinklered  
Private R. R. siding

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Perfect service

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"Service to the entire Mid-South"

**COMPLETE WAREHOUSE FACILITIES**

for the proper Storage and Distribution of  
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**POOL CAR DISTRIBUTION**

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"Memphis Most Modern Warehouses"

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ESTABLISHED 1894

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Insurance Rate \$1.20 per \$1,000 per Annum Distribution a Specialty  
Merchandise storage, dependable service, free switching. Local cartage  
delivery. Illinois Central and Cotton Belt Railway tracks. Automatic  
sprinkler. A.D.T. watchmen.

and Firms are Arranged Alphabetically

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Storage (Mdse.)—Pool Car Distribution—Local delivery service—Office Space. In the heart of the wholesale district and convenient to Rail, Truck and Express terminals. Eight car railroad siding—(N.C.&ST.L. and L.&N.)—Reciprocal switching A.D.T. Service. Represented by Distribution Service, Inc. Member of A.W.A. and M.W.A.

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Reliable Service Since 1903

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Members of

American Chain of Warehouses - American Warehousemen's Association - Allied Van Lines, Inc. - National Furniture Warehousemen's Association

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WAREHOUSE STOCK and POOL CAR DISTRIBUTION

Automatic Sprinkler System—Centrally Located

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FREE SWITCHING—CITY TRUCKING

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WM. C. BOYCE

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Merchandise Storage & Distribution  
Household Goods Storage, Moving & Packing  
Long Distance Operators

Members: A.W.A.-A.C.W.-N.F.W.A.-S.W.T.A.-T.M.T  
Agents—Allied Van Lines

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### TEXAS STORAGE COMPANY

656 NECHES STREET

BEAUMONT, TEXAS

Merchandise and Household Goods

Warehouse, Concrete Construction

30,000 Sq. Ft. Distribution of Pool Cars

Transfer Household Goods

Agent for A.V.L. Member of N.F.W.A.-S.W.T.A.

## CORPUS CHRISTI, TEXAS

### CORPUS CHRISTI WAREHOUSE AND STORAGE COMPANY

Located at PORT SITE

adjacent to docks NAVIGATION DISTRICT No. 1

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Distribution

Drayage

MERCHANDISE EXCLUSIVELY

96,400 Sq. Ft. Sprinklered

Low Insurance Rates

Member: Southwest Warehouse and Transfermen's Assn.

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C. E. BRADLEY, Vice-Pres.

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ESTABLISHED 1875

2nd & 4th Units Santa Fe Building, Dallas 2, Texas

Modern Fireproof Construction—Office, Display, Manufacturers, and Warehouse Space



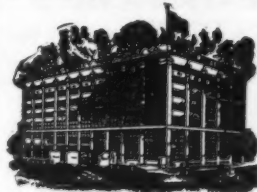
Operators of the Lone Star Package Car Company (Dallas and Fort Worth Divisions)  
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## DALLAS, TEXAS

### INTERSTATE-TRINITY WAREHOUSE COMPANY

361 North Market St., Dallas 2



Merchandise Storage and Distribution

Household Goods Storage

Moving & Packing

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Pool Car Distribution Specialists

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Inc. in 1920

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Lowest Content Insurance Rate

Fireproof Storage of Household Goods, Autos & Merchandise. State and Customs Bonded. Private Trackage—T. & P. and So. Pac. Rys. Pool Car Distribution—Motor Truck Service.

Members—NFWA—SWTA—Agent for AVL.



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In Fort. Worth It's Binyon-O'Keefe

MERCHANDISE STORING—POOL CAR DISTRIBUTION

Our modern Centrally located warehouse is completely equipped to serve you with over 200,000 sq. ft. of merchandise and household storage space

MOVING—STORAGE—PACKING—SHIPPING

Since 1875

BINYON-O'KEEFE

Since 1875

STORAGE CO.

800 Calhoun St., Fort Worth 1

Associated with Distribution Service, Inc.



## FORT WORTH, TEXAS

Storage, Cartage, Pool Car Distribution



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Agents, North American Van Lines, Inc.





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Member of A. W. A. — S. W. & T. A.

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No. 1 MAIN STREET HOUSTON 2, TEXAS  
Located in the heart of the jobbing district  
MERCHANDISE STORAGE—POOL CAR DISTRIBUTION  
Lowest Insurance Rates Automatic Sprinkler Watchman

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**POOL  
CARS  
OUR  
SPECIALTY**

**FEDERAL  
WAREHOUSE CO.**  
2001 NANCE STREET  
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New Location — Improved Facilities

**BETTER WAREHOUSING IN HOUSTON**  
Our new warehouse is 800 feet long by 250 feet wide with car spot on the Mo. Pac. R. R. for 20 cars at one time. Plenty of truck dock space with wide area to maneuver trucks and trailers.  
This modern one-story property with high ceilings and unlimited floor load capacity is fully equipped with modern materials handling apparatus.  
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Merchandise and Household Goods Storage  
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Sprinklered—A.D.T. Watchmen  
Shipside and Uptown Warehouses  
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Lone Star Package Car Co.  
Member of N. F. W. A. — State and Local Ass'n's.

HOUSTON, TEXAS

**TEXAS WAREHOUSE COMPANY**

Established 1901  
Forty-Seven Years  
Under Same Continuous Management  
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Pool Car Distribution Sprinklered Throughout  
A.D.T. Supervised Service

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Forwarding and Distributing  
MERCHANDISE STORAGE  
Warehouses Sprinklered Throughout  
Supervised by A. D. T. Service.  
SERVICE THAT COUNTS

HOUSTON, TEXAS

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Merchandise Storage—Pool Car Distribution—Drayage Service  
A.D.T. Central Station Automatic Supervisory  
Sprinkler, Waterflow, and Fire Alarm Service  
Watchmen, U. S. Customs Bonded, Office Space  
Represented in all principal cities by  
UNIVERSAL CARLOADING & DISTRIBUTING COMPANY  
Division of  
UNITED STATES FREIGHT CO.  
Members State and Local Associations

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BENJ. S. HURWITZ, Pres.

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Transfer and Storage Co., Inc.**

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Since 1883  
Merchandise & Household Goods Storage—Pool Car Distribution—  
Lift Van Service—20 car lengths of trackage.  
Fireproof Warehouses—A.D.T. Automatic Fire and Burglary Protection  
Agents for Allied Van Lines, Inc. Members N.F.W.A. State and Local Assn.

SAN ANTONIO, TEXAS

**MERCHANTS  
TRANSFER & STORAGE CO.**  
Merchants & Transfer Sts., San Antonio 6  
Complete Storage and Distribution Service  
Over 50 years of satisfactory service  
Member of A.W.A.—N.F.W.A.—S.W.A.

SAN ANTONIO, TEXAS

Agent for Allied Van Lines, Inc.

**Scobey Fireproof Storage Co.**

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HOUSEHOLD — MER-  
CHANDISE — COLD  
STORAGE — CARTAGE  
DISTRIBUTION  
INSURANCE RATE — 10c  
Member of 4 Leading Associations

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Specialists in Merchandise Distribution  
FIREPROOF CONSTRUCTION  
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TYLER, TEXAS

IRA P. HILDEBRAND, Owner & Manager

**HILDEBRAND WAREHOUSE COMPANY**

Bonded under the Laws of Texas  
General Storage and Distribution from the Center of  
East Texas. Specializing in Pool Car Distribution  
and Merchandise Warehousing

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**POOL CAR DISTRIBUTION**

Since 1920

**TARRY WAREHOUSE & STORAGE CO.**

Wichita Falls, Texas

OGDEN, UTAH

MEMBER OF A.W.A.

**WESTERN GATEWAY STORAGE CO.**

GENERAL WAREHOUSING  
POOL CAR DISTRIBUTION  
MERCHANDISE AND COLD STORAGE

SALT LAKE CITY, UTAH

**CENTRAL WAREHOUSE**

520 West 2nd South St., Salt Lake City 1  
Fireproof Sprinklered  
Merchandise Storage  
Pool Car Distribution Office Facilities  
Member A. W. A.

and Firms are Arranged Alphabetically

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### Merchandise Storage and Distribution

Over 1,000,000 cubic feet reinforced Concrete Sprinklered Space  
Insurance Rate 11 Cents

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Represented by  
ALLIED DISTRIBUTION, INC., and  
DISTRIBUTION SERVICE, INC.  
New York-Chicago-San Francisco

## SALT LAKE CITY, UTAH

Merchandise Storage—Pool Car Distribution

### KEYSER MOVING AND STORAGE CO.

328 West 2nd South, Salt Lake City 1

Established 1910

72,000 sq. ft. space. Reinforced concrete and brick. Central location. Systematic delivery service. A. D. T. automatic burglar and fire protection. Office and desk space. Member-AWA-UVL-UWA-AWI



## SALT LAKE CITY, UTAH

"Serving the Intermountain West"

### SECURITY STORAGE & COMMISSION CO. Inc.

230 So. 4th West St., Salt Lake City (1)

Warehousing-Distribution service since 1906

Represented by American Chain of Warehouses

New York (17)

Chicago (4)

230 Park Avenue

33 W. Jackson Blvd.

Member of American Warehousemen's Association

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Household • Automobile Storage • Merchandise

### NEW-BELL STORAGE CORPORATION

22nd St. & Monticello Ave.

NORFOLK 18, VIRGINIA

MODERN SPRINKLER EQUIPPED WAREHOUSE

50,000 SQUARE FEET PRIVATE RAIL SIDING

Lowest Insurance Rate in Norfolk. Pool Car Distribution

WE SPECIALIZE IN MERCHANDISE STORAGE AND DISTRIBUTION

AGENTS AERO MAYFLOWER TRANSIT COMPANY

Member M.W.A. & A.T.A.



## NORFOLK, VA.

### STORE and DISTRIBUTE IN THE PROSPEROUS TIDEWATER AREA THRU PRUDENTIAL

HOUSEHOLD GOODS MOVED, PACKED, SHIPPED  
POOL CAR TRANSFER TRUCKING SERVICE

LARGE FIREPROOF WAREHOUSE

OPEN YARD STORAGE AVAILABLE

LOCATED ON N. & W. SIDING

### PRUDENTIAL STORAGE and WAREHOUSE COMPANY

Billings St. at N. & W. Ry.

P. O. Drawer 1859 — Telephone 22481 or 54008

## NORFOLK, VA.

Find Warehousing Since 1914

### Security Storage and Van Co.

500-530 FRONT STREET

COLLECTIONS • POOL CARS • DISTRIBUTION  
MOTOR VAN AND LIFT VAN SERVICE  
Member—Nat'l. F.W.A.—Allied Van Lines

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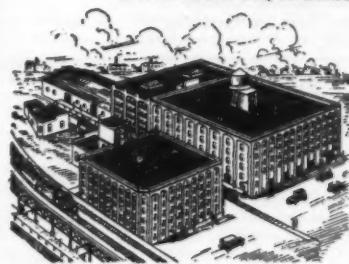
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MERCHANDISE  
STORAGE &  
DISTRIBUTION

INSURANCE  
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PER YEAR



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Telephone, Office and Stenographic Service  
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271 Madison Ave. (16)  
Merchandise Storage  
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Household Goods Storage  
Heated—Unheated—Yard  
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Waterfront Facilities  
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Complete local and over-the-road truck services with 70  
units of all types of equipment, including low-bed  
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40 Car Track Capacity  
Modern Handling  
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"Store American" For Economical Efficient Complete Merchandise  
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**MILWAUKEE'S ONLY COMPLETELY  
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MERCHANDISE WAREHOUSING  
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Milwaukee 4, Wisconsin

Cooler, Freezer and General Merchandising Storage

Deep Water Dock, Private Siding

on C.M.St.P. & P. R.R.

## PROGRESSIVE PARTS

(Continued from Page 29)

of a long telescopic chute with a belt conveyor inside, which carries the coal into the ship's hold. The tippie then sets the car back on the track and pushes it out, while a new one is positioned. A kick-back track sends the empty cars back toward the land. The entire electrically-operated dumper and loading tower can be moved to any part of the 375 ft. tippie dock to load different hatches; coal cars can be emptied at the rate of one every three minutes. Most operations load 1,000 tons an hour, but the rated capacity is 1,500 to 2,000 tons an hour.

Last year the railroads serving Charleston hauled 125 percent more carload freight into the port

than in 1946. This increase was 100 percent over the national average increase. Charleston stood sixth among the 43 U. S. ports cited. The Southern Railway reported that coal shipments set a record in Charleston last year. Eight hundred and five ships entered the harbor in that time, with an aggregate tonnage of 3,340,806, a 45 percent increase over 1946.

Charleston does not rest on her laurels now that she has one of the most modern shipping terminals on the Atlantic Coast, the former Port of Embarkation, but plans improvements for other waterfront properties, to enable them better to serve shipping needs. The State Ports Authority plans to extend

the marginal tracks at one pier to allow simultaneous loading of four hatch vessels. Installation of a conveyor system and the flooring of an additional warehouse section will provide 64,000 more sq. ft. of shipside storage space at the North Charleston terminals. Major rehabilitation of Union pier has been undertaken. Additional handling equipment and switching locomotives will be purchased, to better Charleston's fine handling system. The Authority's traffic bureau is already set up with offices in both Charleston and Columbus, to enable it to obtain additional rate adjustments favorable to shippers using the port. Charleston's port is growing, in size, in capacity, and in service.

SHEBOYGAN, WIS.



## SHEBOYGAN WAREHOUSE & FORWARDING CO.

A Merchants & Manufacturers Warehouse

11th and Illinois Ave. Sheboygan, Wis.

Member of A.W.A.—May. W.A.—Wis. W.A.



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Seven Buildings to Meet All Requirements for Modern Storage and Distribution

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1-VAN HORNE AVENUE, MONTREAL, CANADA

200,000 SQ. FT. OF MODERN FIREPROOF SPACE LOCATED IN THE EXACT CENTER OF THE CITY OF MONTREAL

Canadian Customs Bond. Private Siding—8 Car

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LOCAL AND LONG DISTANCE MOVERS

Private Room System for Storage

CRATING, PACKING and SHIPPING

Charges Collected and Promptly Remitted

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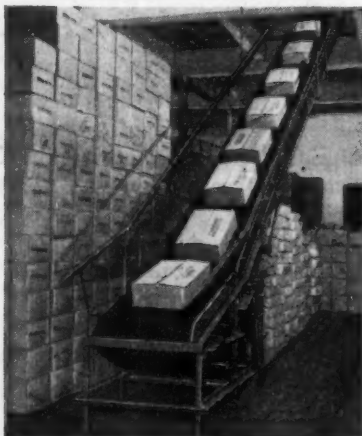


## FROM FLOOR-TO-FLOOR



## WITH EASE AND SPEED ON "STREAMLINER" INCLINED BELT CONVEYORS

These economical, efficient Floor-to-Floor Conveyors for handling packages, cases, cartons, etc. are available in two types: Heavy Duty, with a load capacity of 85 pounds per foot and Light Duty, with a load capacity of 50 pounds per foot. Both types are reversible . . . operate at a constant speed of 45 feet per minute . . . have roller bed construction with rollers "Set High" or "Set Low" . . . are equipped with rough top rubber belt and manual belt take-up for slack. They are available in standard sizes up to 30 inches wide and can be furnished portable or supported from one floor. Write for details.



**HARRY J. FERGUSON CO.**

WHEEL • PORTABLE BELT • BELT  
AND ROLLER GRAVITY CONVEYORS

165 WEST AVENUE, JENKINTOWN, PA.

## INDEX TO GENERAL ADVERTISERS

Public warehouse advertisements start on page 83 and are arranged  
alphabetically by states, cities and firms.

A		I	
Air Express Div. of Railway Express Agency	53	Industrial Packaging Engineers Assn. of Amer.	79
American District Telegraph Co.	9	International Harvester Co.	17
American Map Company	75		
Anthony Company	71	M	
Automatic Transportation Co.	13	Mack Manufacturing Corp.	2
		Mowbray & Robinson Lumber Co.	77
B		National Pellet Corp.	73
Baker Raulang Company	1	Newark Tidewater Terminal, Inc. Third Cover	
Bassick Company	11	Nolan Company	69
Bayway Terminal Corp.	10	North American Van Lines, Inc.	77
Bemis Bro. Bag Company	75		
		P	
C		Pan American World Airways	12
Central Paper Company	79	Photographer's Assoc. of America	75
		Pope & Talbot, Inc., Steamship Div.	65
D			
Darnell Corporation, Ltd.	63	R	
Delta Air Lines, Inc.	8	Ross Carrier Company	95
E		S	
Eaton Manufacturing Co.	33	Standard Conveyor Co.	71
Electric Industrial Truck Assoc.	7	Stevens Appliance Truck Co.	59
Electric Storage Battery Co.	47	Studebaker Corporation	39
F		T	
Fairbanks Company	34	Towmotor Corporation	Second Cover
Ferguson Company, Harry J.	114	Trans World Airline	4
Food Machinery Corp.	73		
Fruehauf Trailer Co.	14 & 41		
		U	
G		Union Pacific Railroad	6
GMC Truck & Coach Div.	5	United Air Lines	43
Gerstenschlager Company	61	United States Rubber Co.	57
Great Lakes Steel Corp.	18		
		Y	
H		Yale & Towne Manufacturing Co.	45
Harborside Warehouse Co.	Back Cover		
Hebard & Company, W. F.	69		

"we can  
take it!"

IF YOUR COMMODITIES clear through the **Port of New York**, we'd like your business. Port Newark is ideally situated to serve the metropolitan New York area—a perfect springboard to hungry markets abroad.

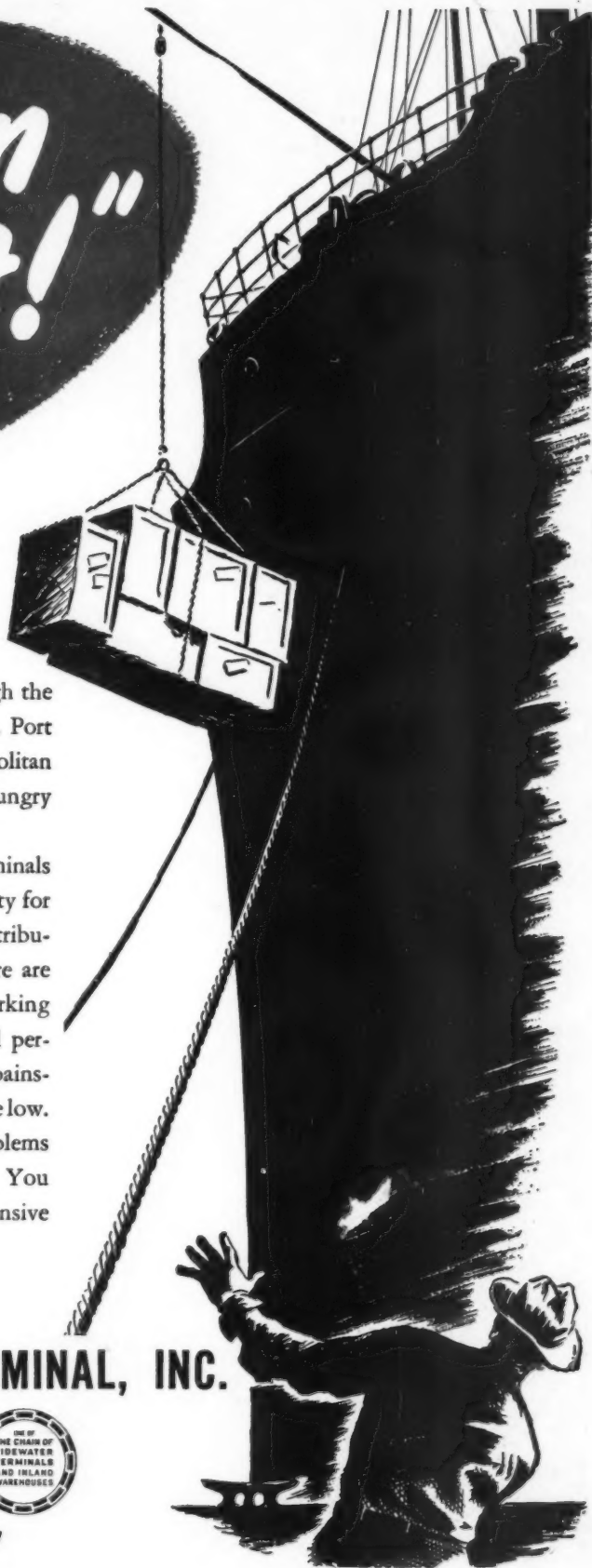
"Newark Tidewater" is one of the great terminals facing the Atlantic. It offers every modern facility for the safe, efficient, economical storage and distribution of your products, bulk or packaged. Here are ample wharfage space and equipment for working **big, ocean-going freighters**. Highly trained personnel, up-to-the-minute methods, assure fast, painstaking handling and shipping. Insurance rates are low.

Bring us your distributional and storage problems in this great industrial and commercial center. You will find our facilities and services comprehensive and helpful.

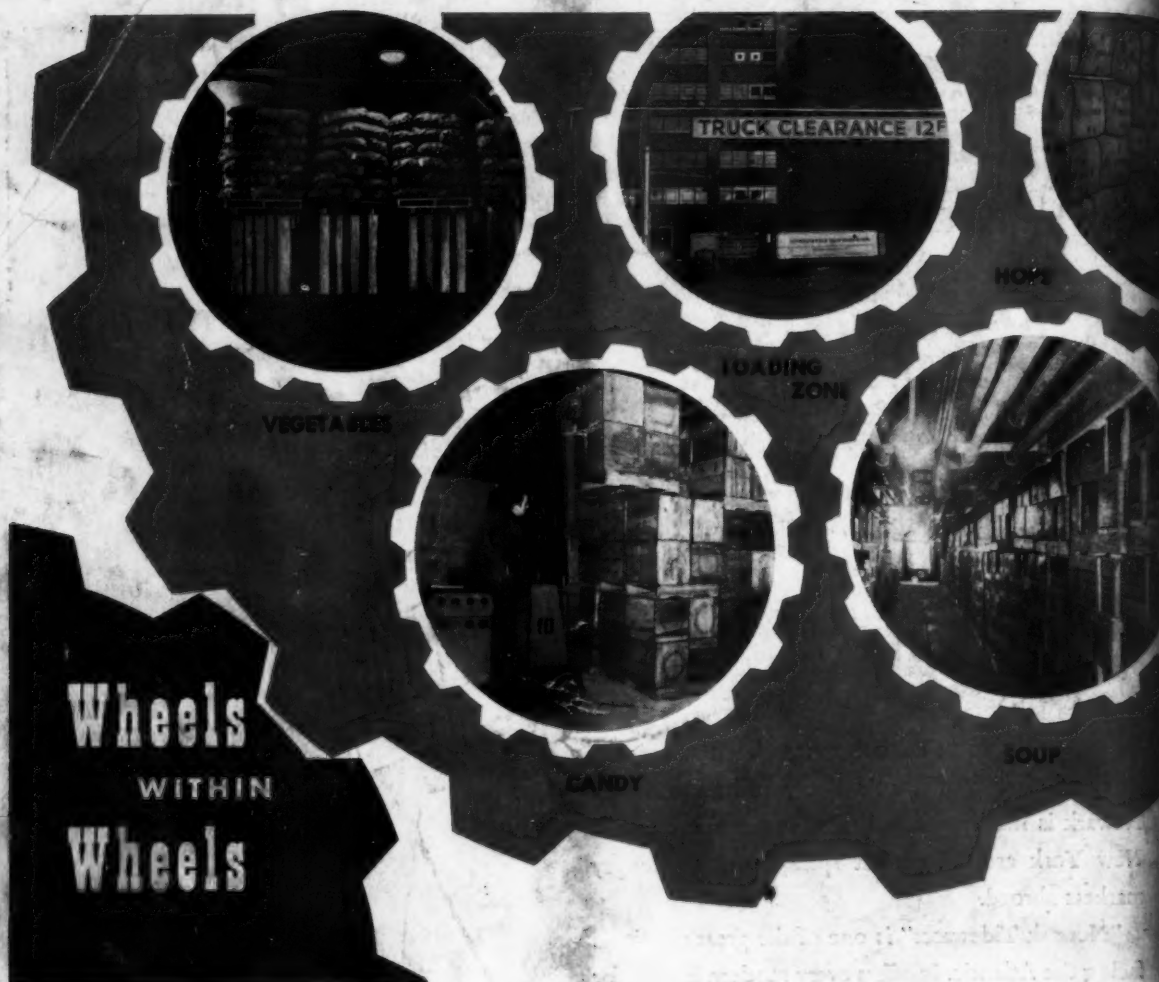
## NEWARK TIDEWATER TERMINAL, INC.

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J. A. LEHMAN, Vice Pres. & Gen. Mgr.







**I**N A WAREHOUSE as vast as Harborside—as modern as Harborside—it is logical that special provision be made for each of the numerous types of merchandise stored there. There is a place for everything—and everything is in its place—at Harborside.

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Workmen are skilled in handling all kinds of commodities, and have the mechanized equipment to do the job quickly and safely. Strategically located Harborside has

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